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FIG. 1

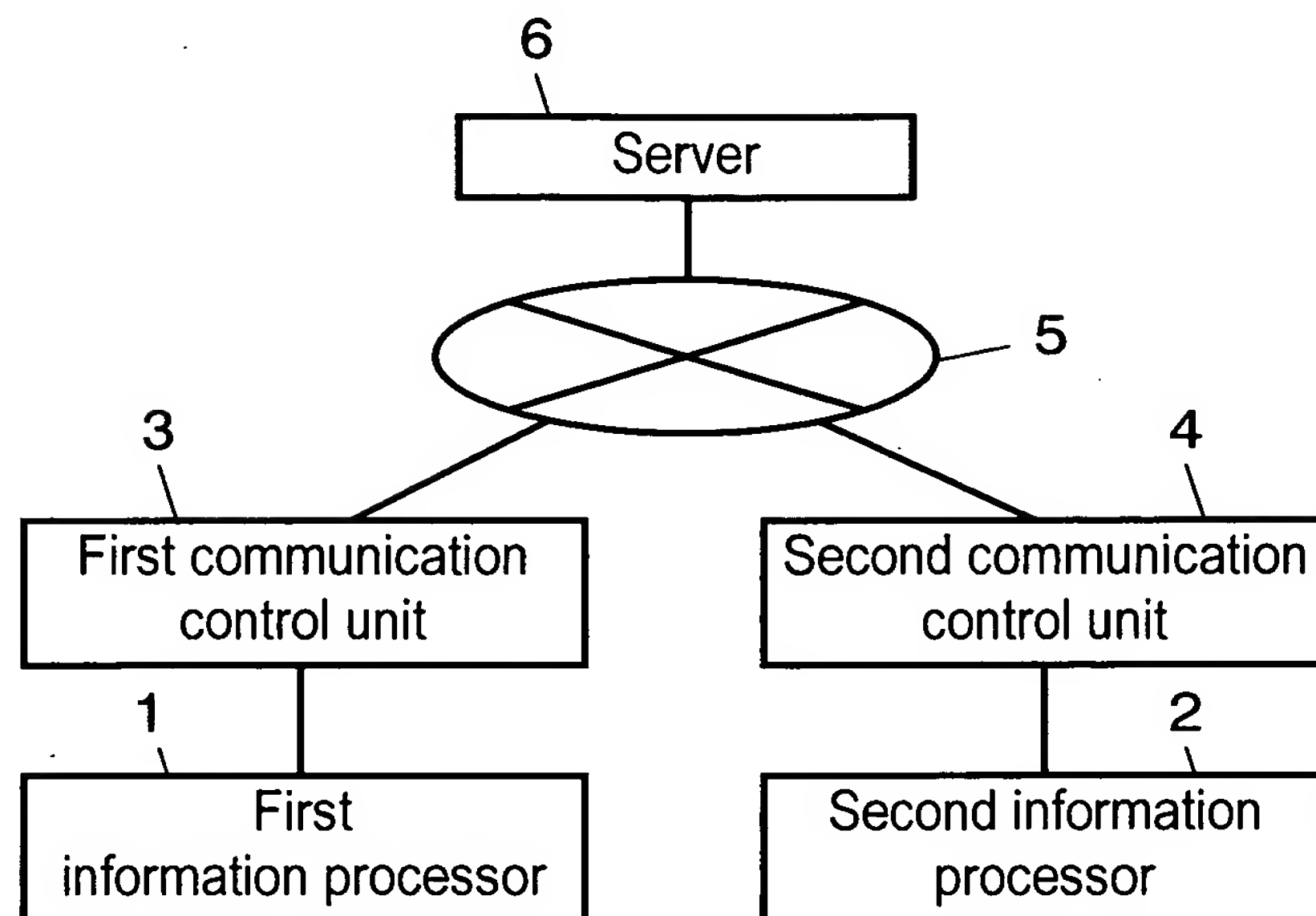
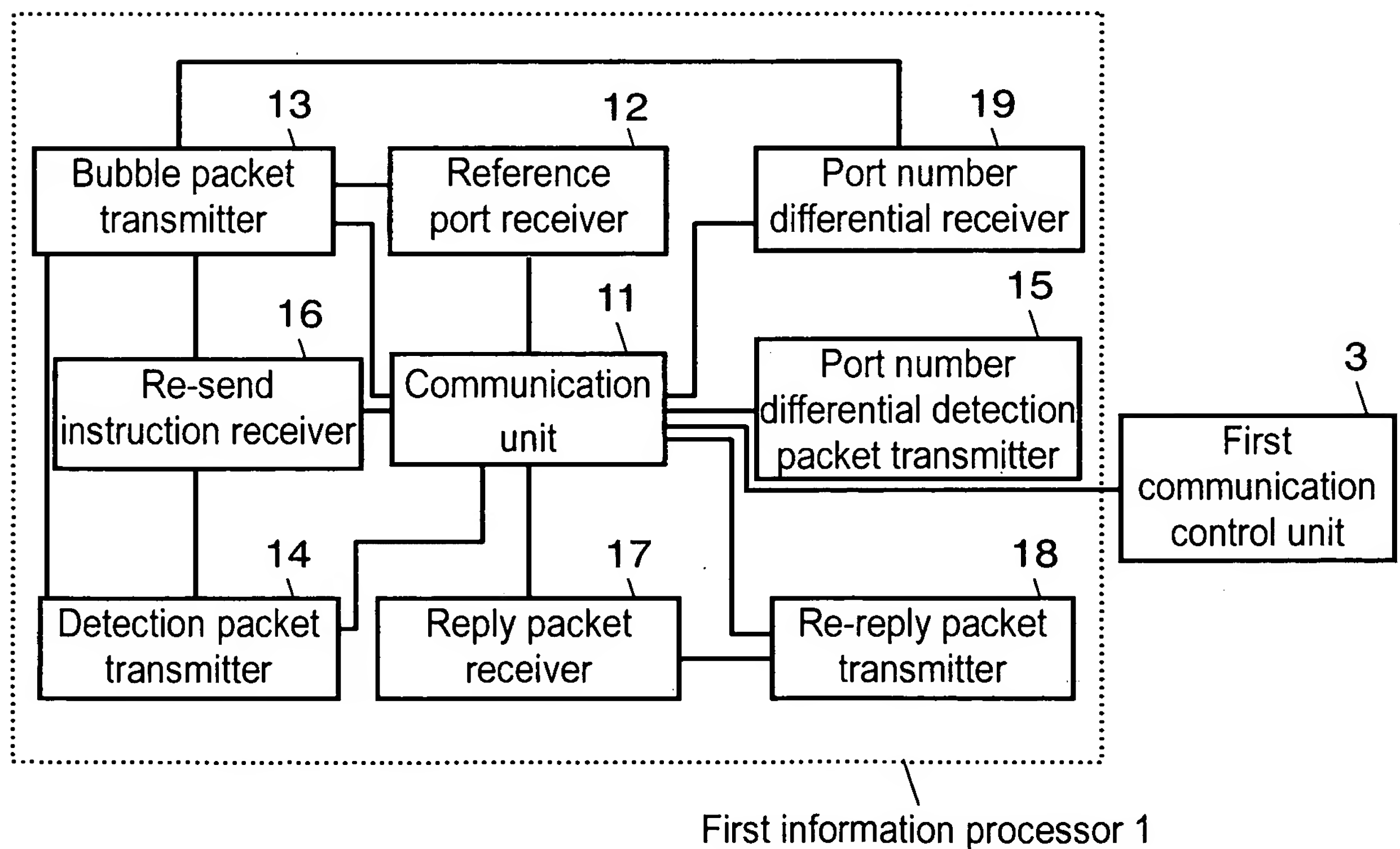


FIG. 2



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FIG. 3

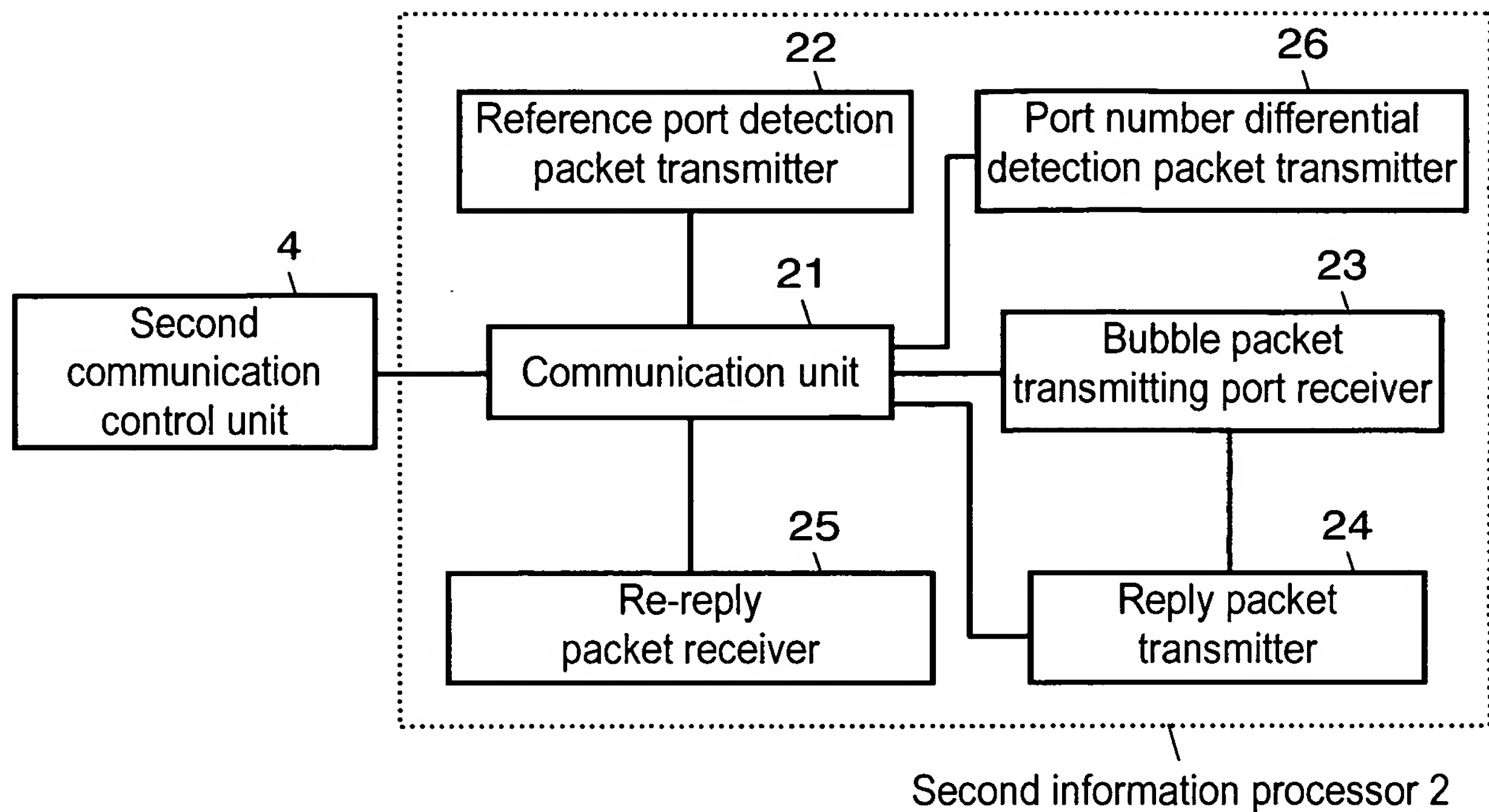
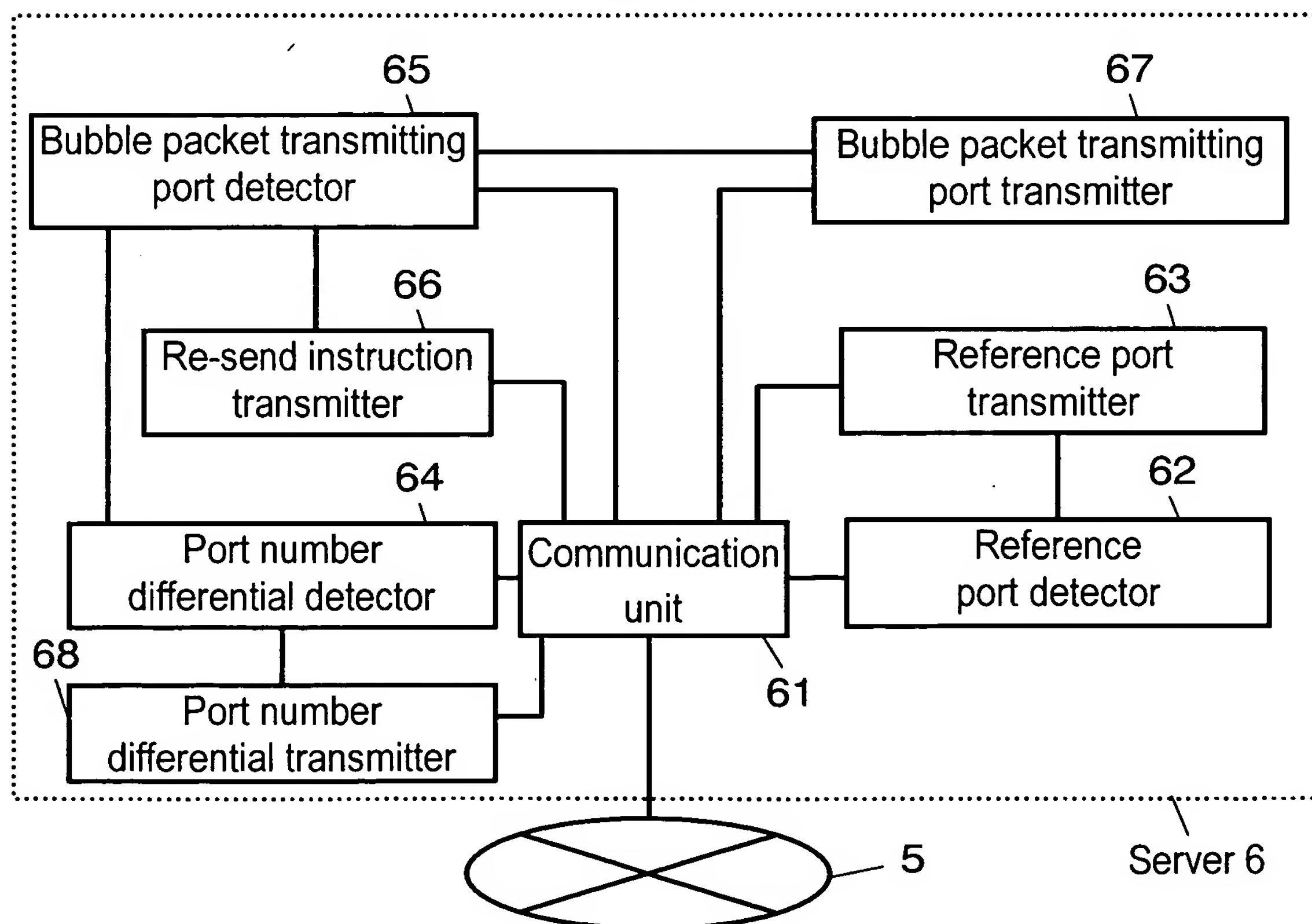


FIG. 4



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FIG. 5

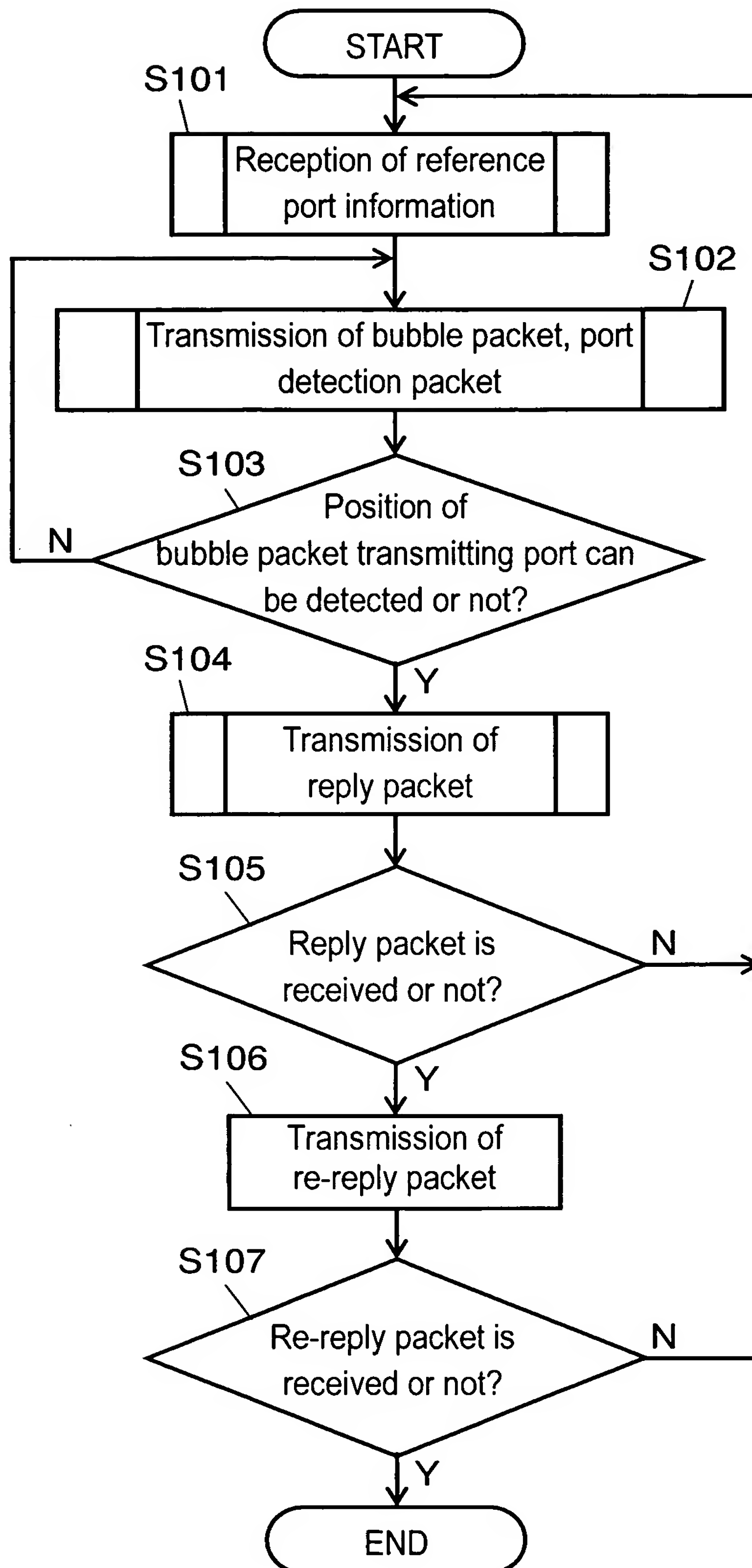
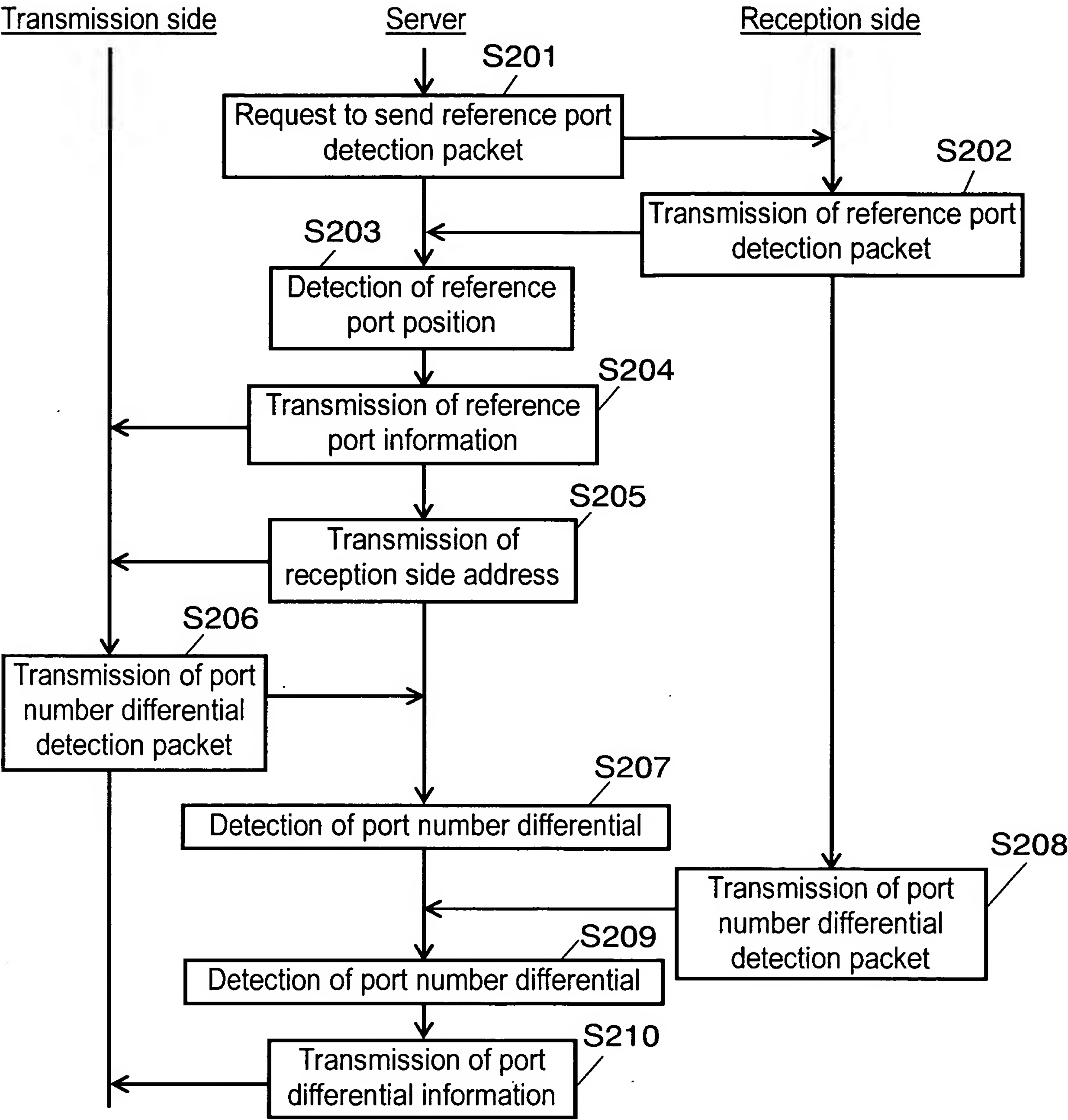


FIG. 6



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FIG. 7

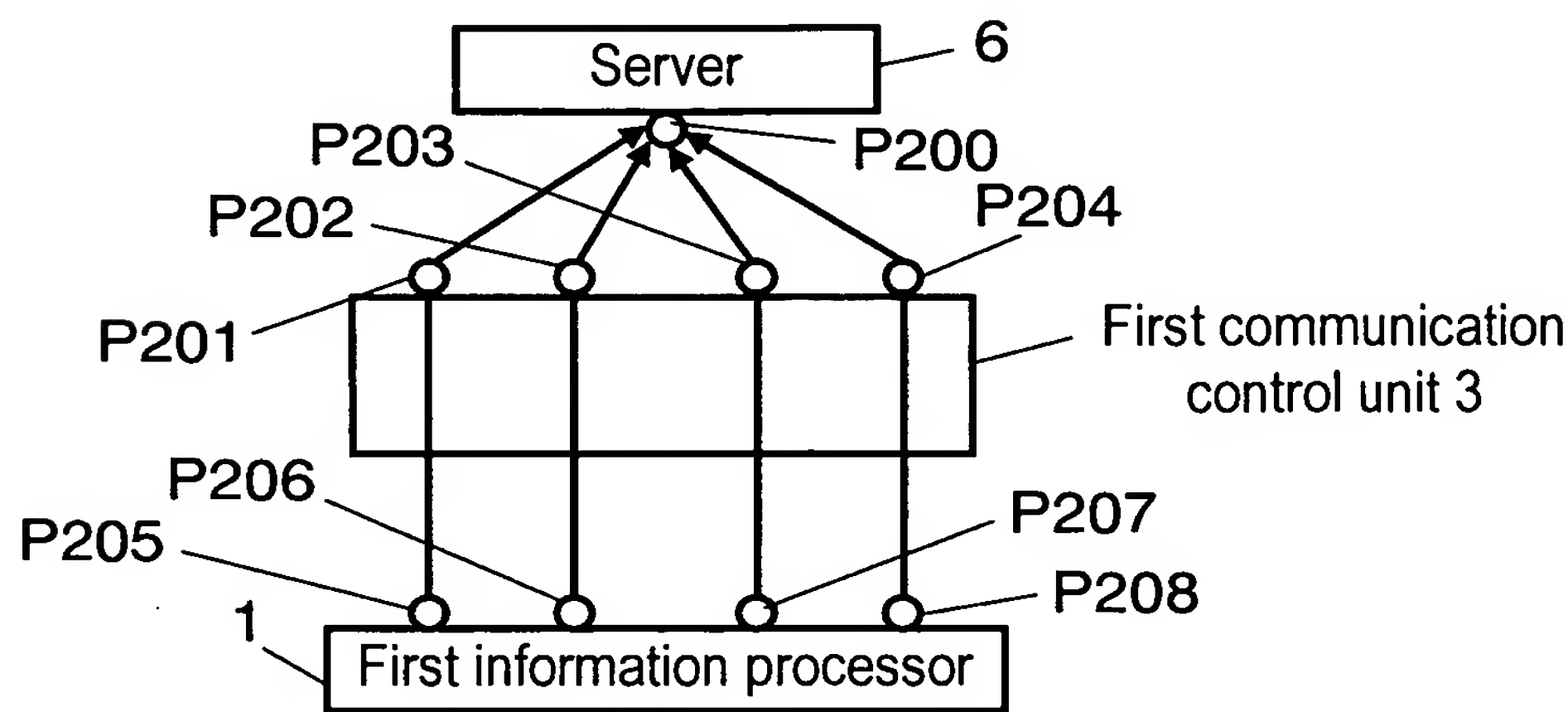
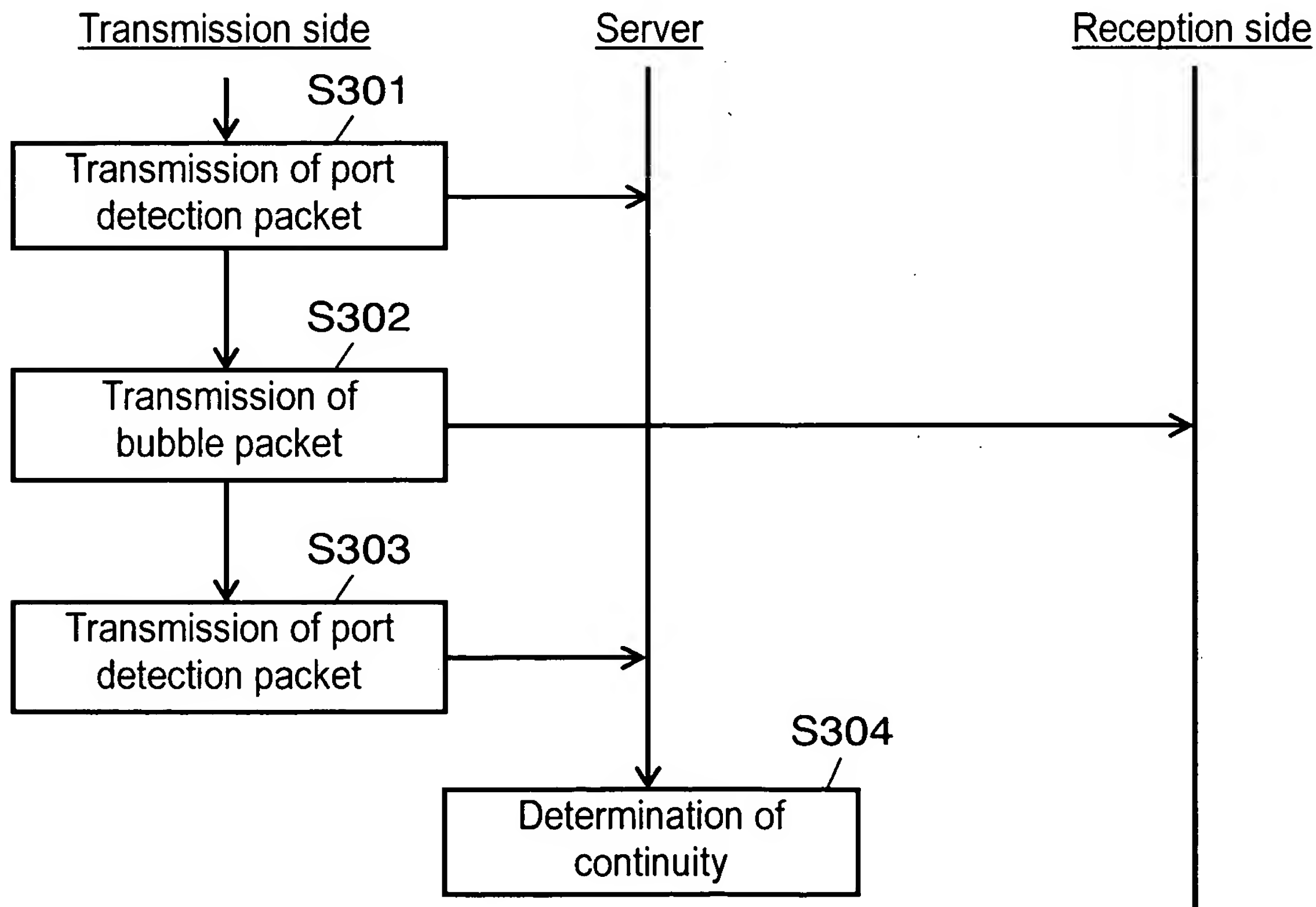
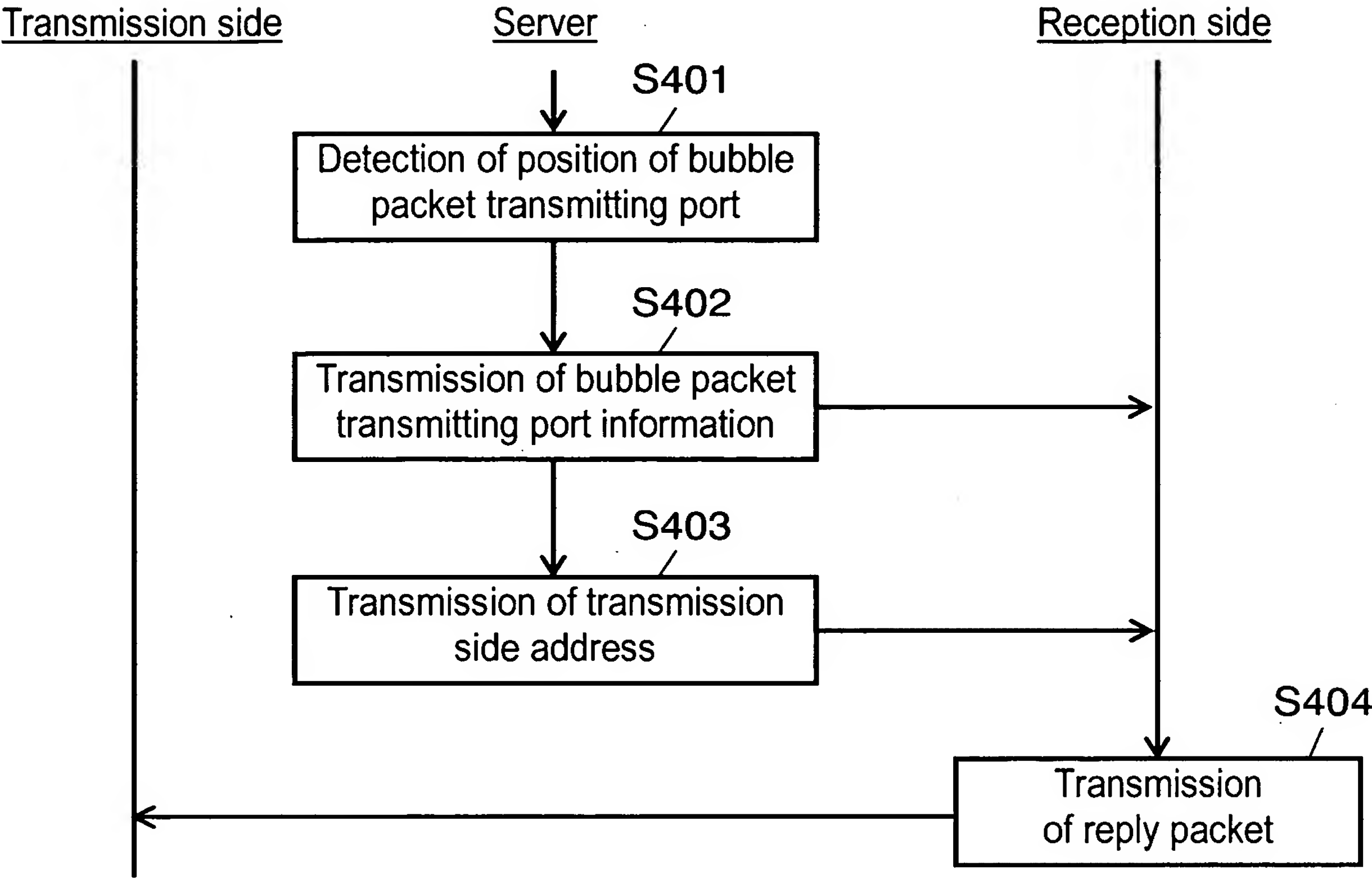


FIG. 8



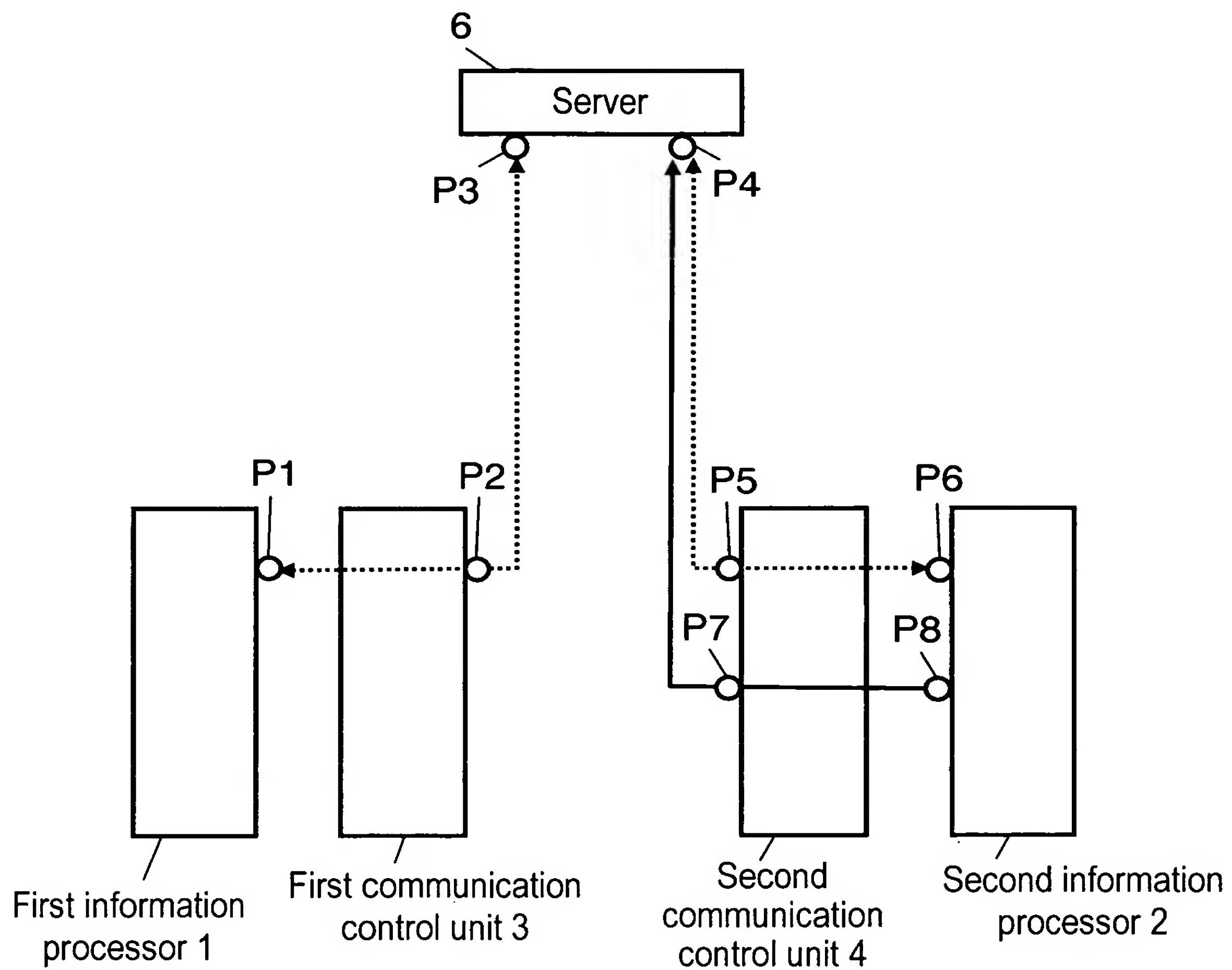
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FIG. 9



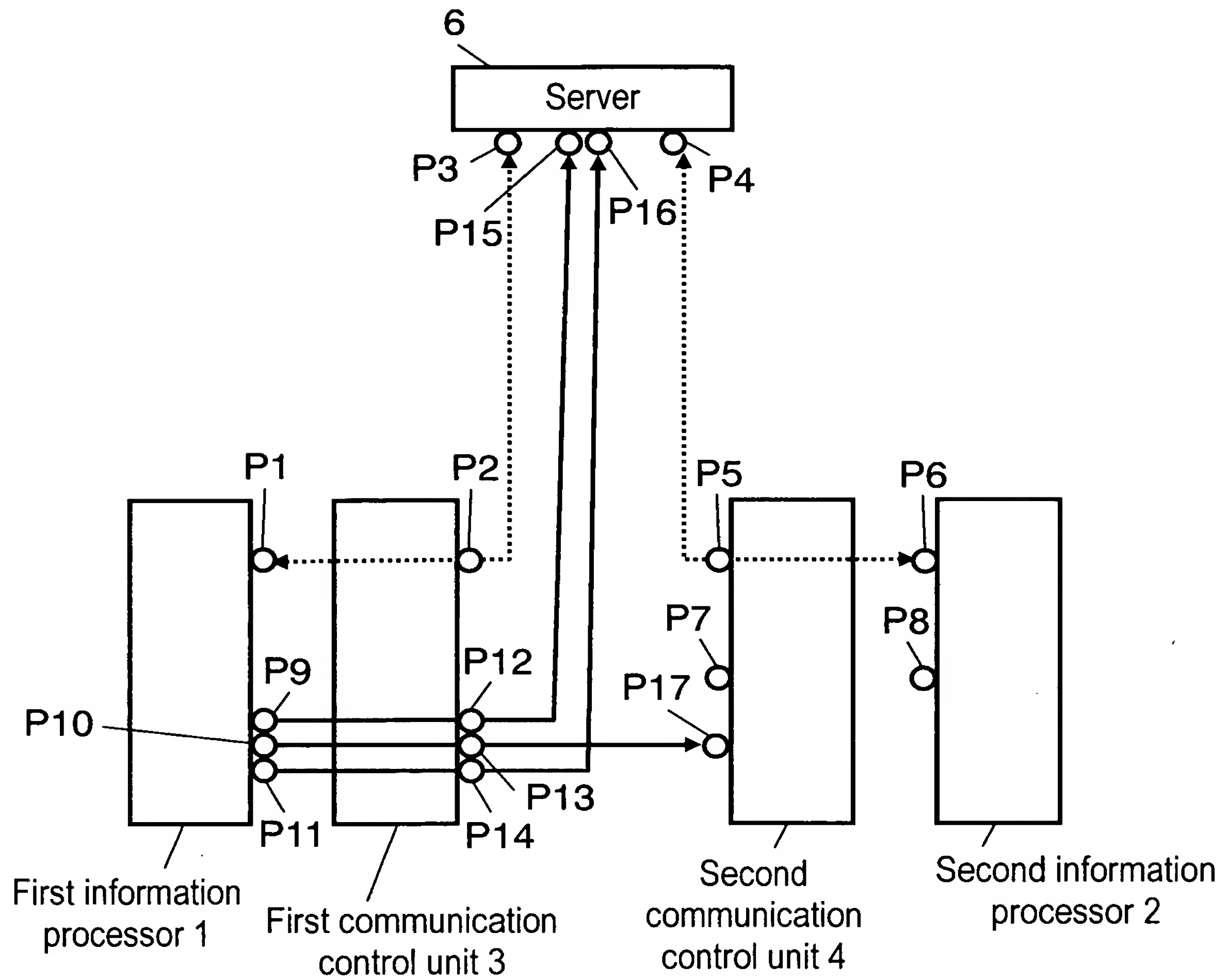
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FIG. 10



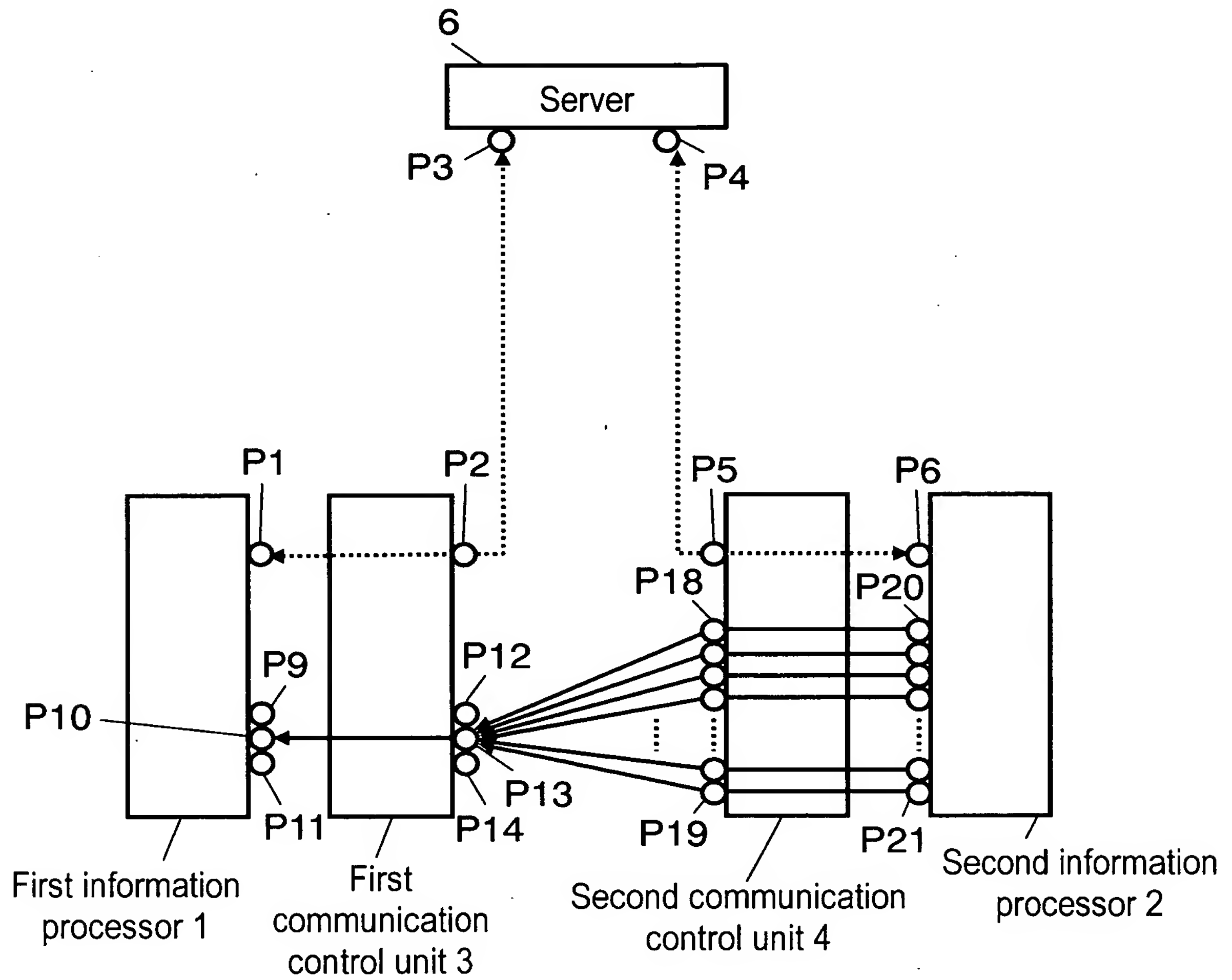
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FIG. 11



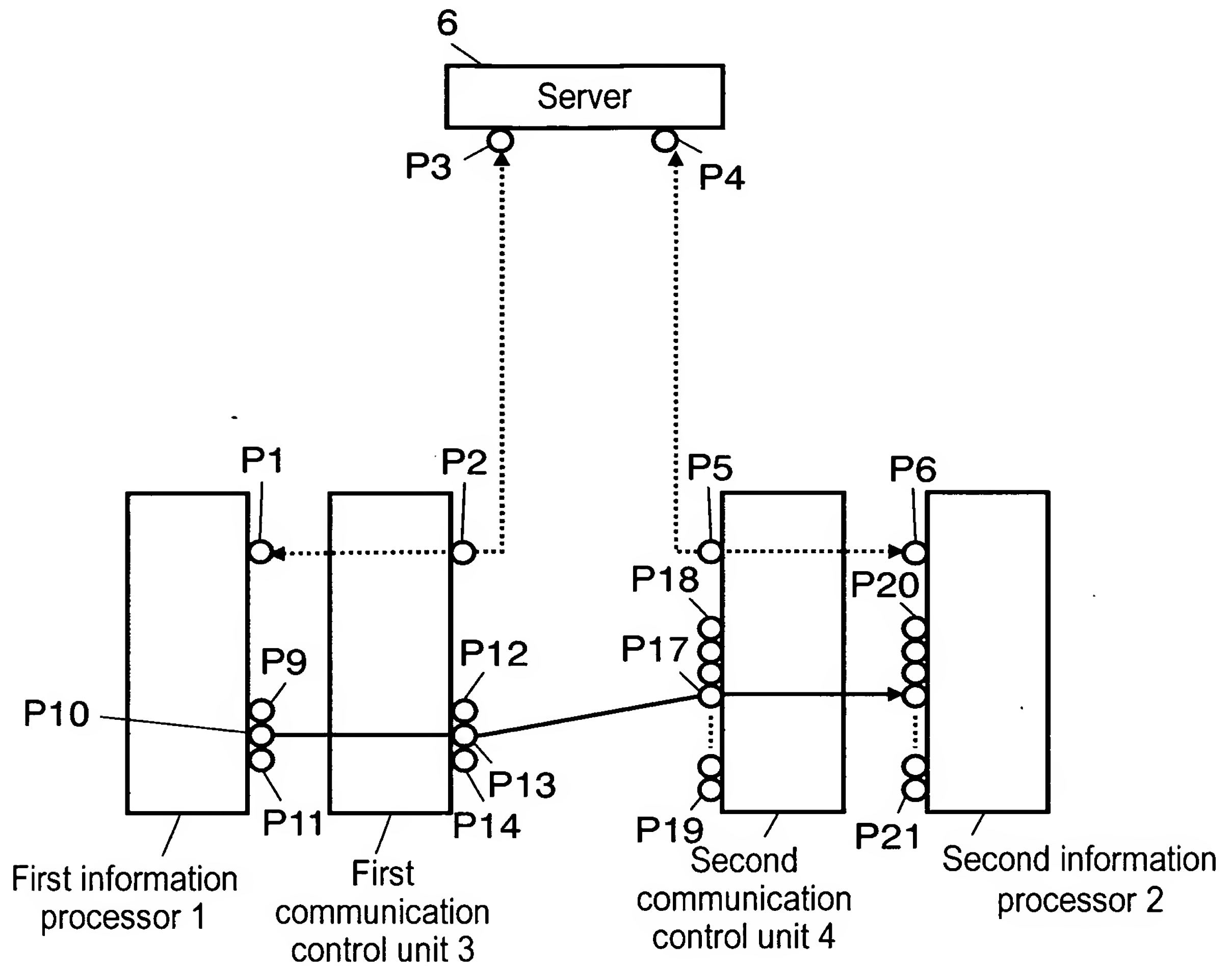
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FIG. 12



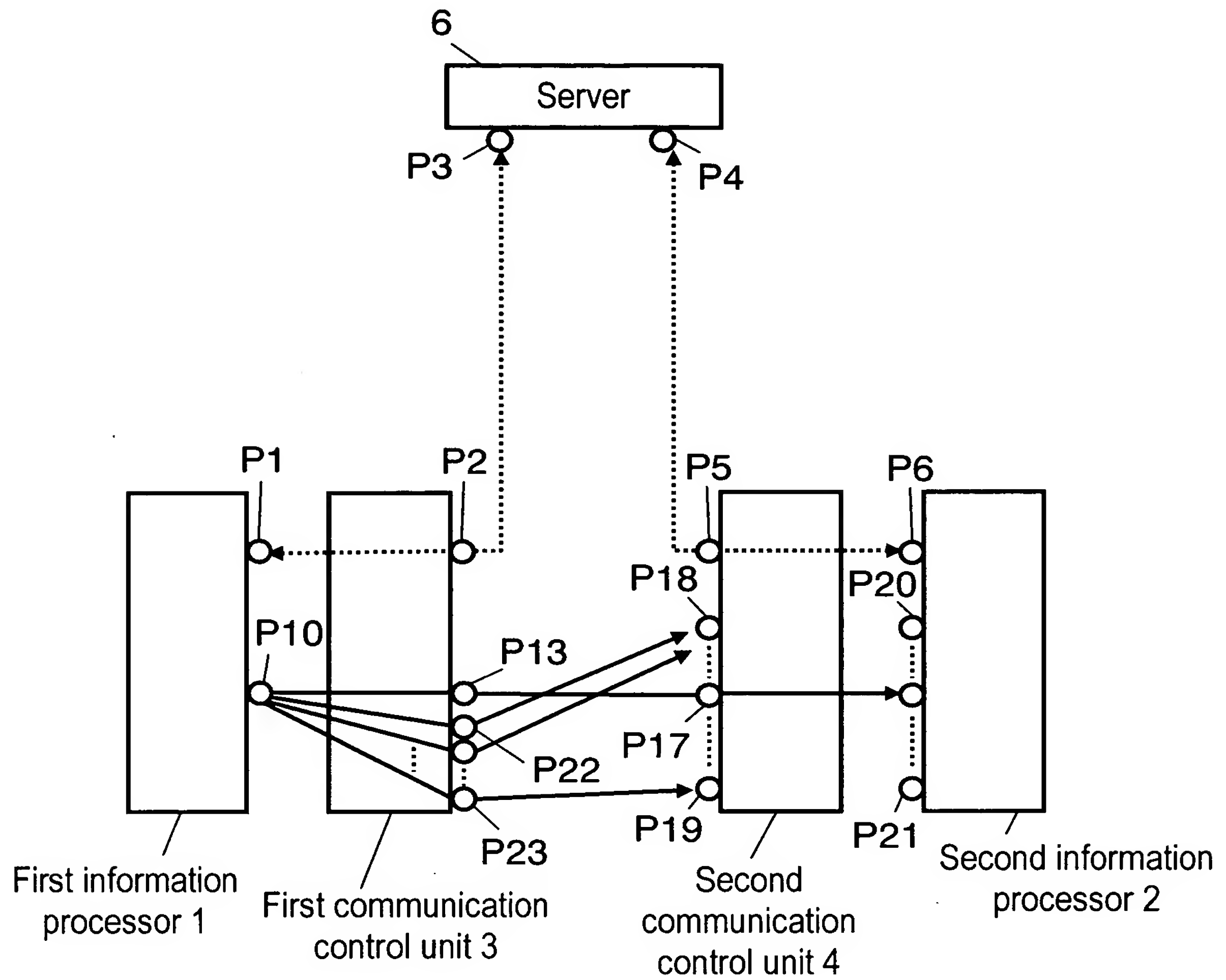
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FIG. 13



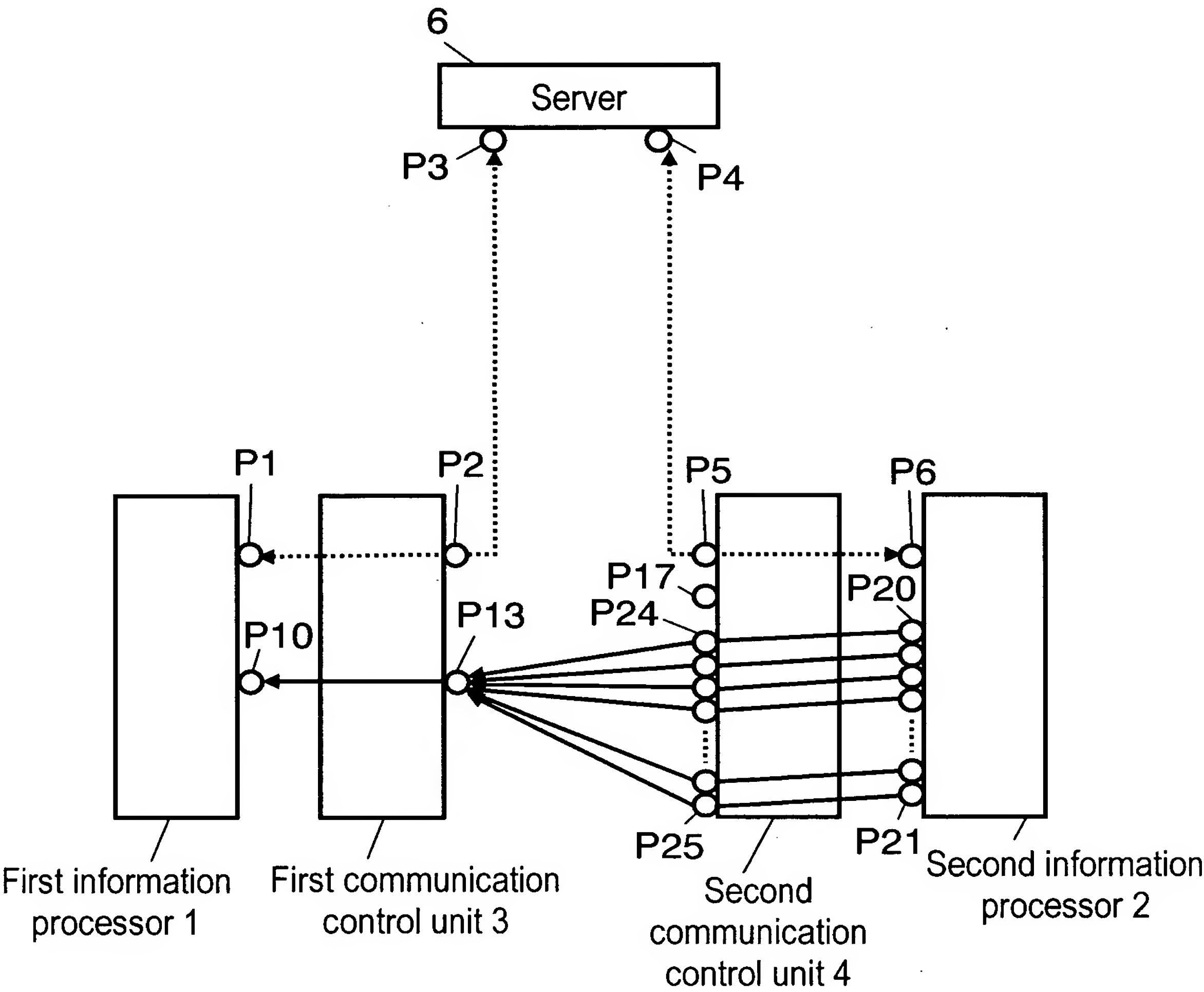
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FIG. 14



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FIG. 15



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FIG. 16

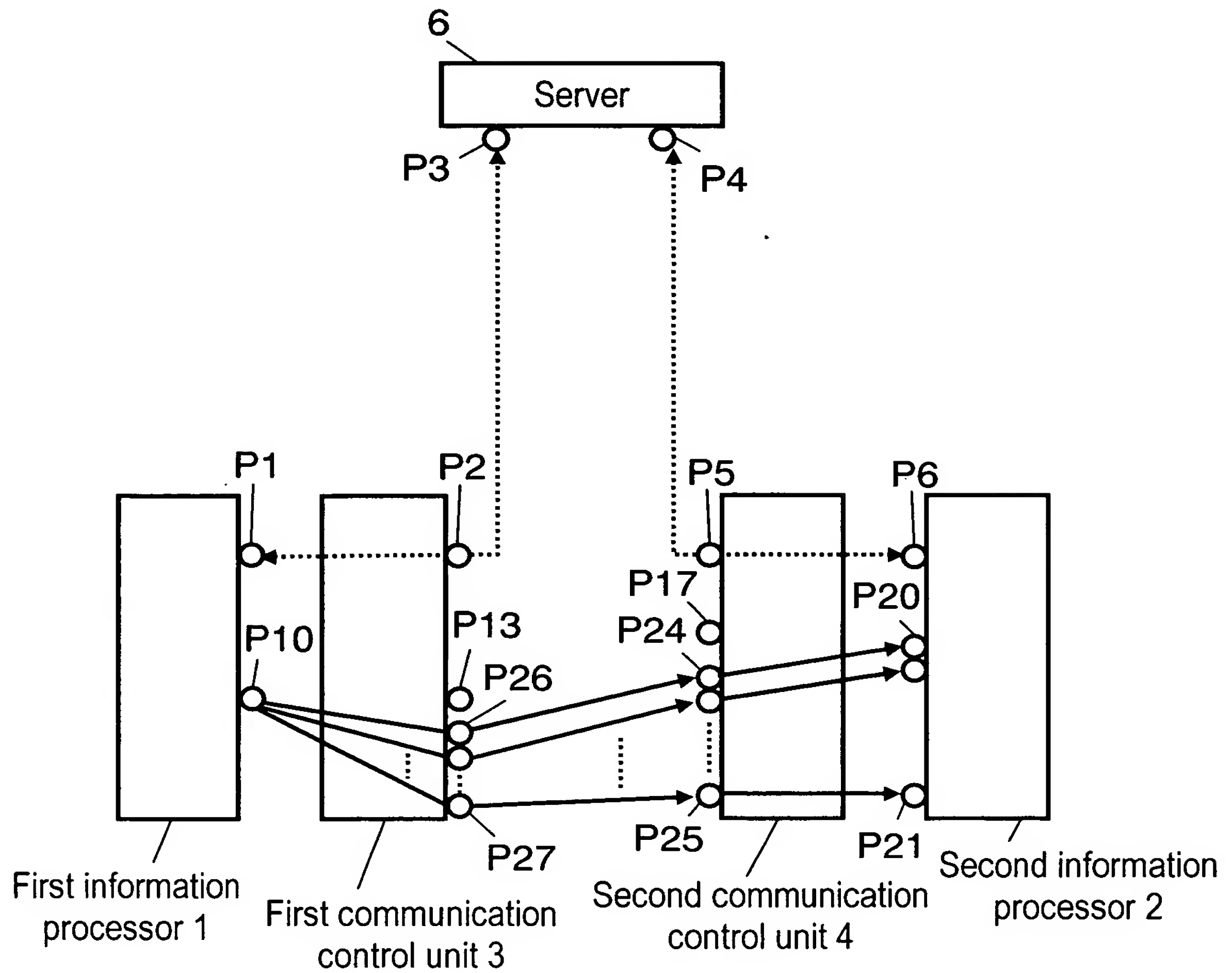


FIG. 17

Reception side Transmission side	O	F	R	PR	Sa	AS	Sc	Sd	Se	PS
O	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
F	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
R	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
PR	O	O	O	O	O	O	O	O	O	O
Sa	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
AS	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Sc	O	O	O	O	O	O	O	O	O	O
Sd	⊙	⊙	⊙	O	⊙	⊙	O	⊙	⊙	O
Se	⊙	⊙	⊙	O	⊙	⊙	O	⊙	⊙	O
PS	O	O	O	O	O	O	O	O	O	O

O : Connection enabled if position of bubble packet transmitting port can be detected and reply packet is sent by using target port for transmitting bubble packet

⊙ : Connection enabled if position of bubble packet transmitting port can be detected

O : Open NAT

F : Full Cone NAT

R : Restricted NAT

PR : Port Restricted NAT

Sa : Symmetric NAT A

AS(Sb) : Address Sensitive Symmetric NAT

Sc : Symmetric NAT C

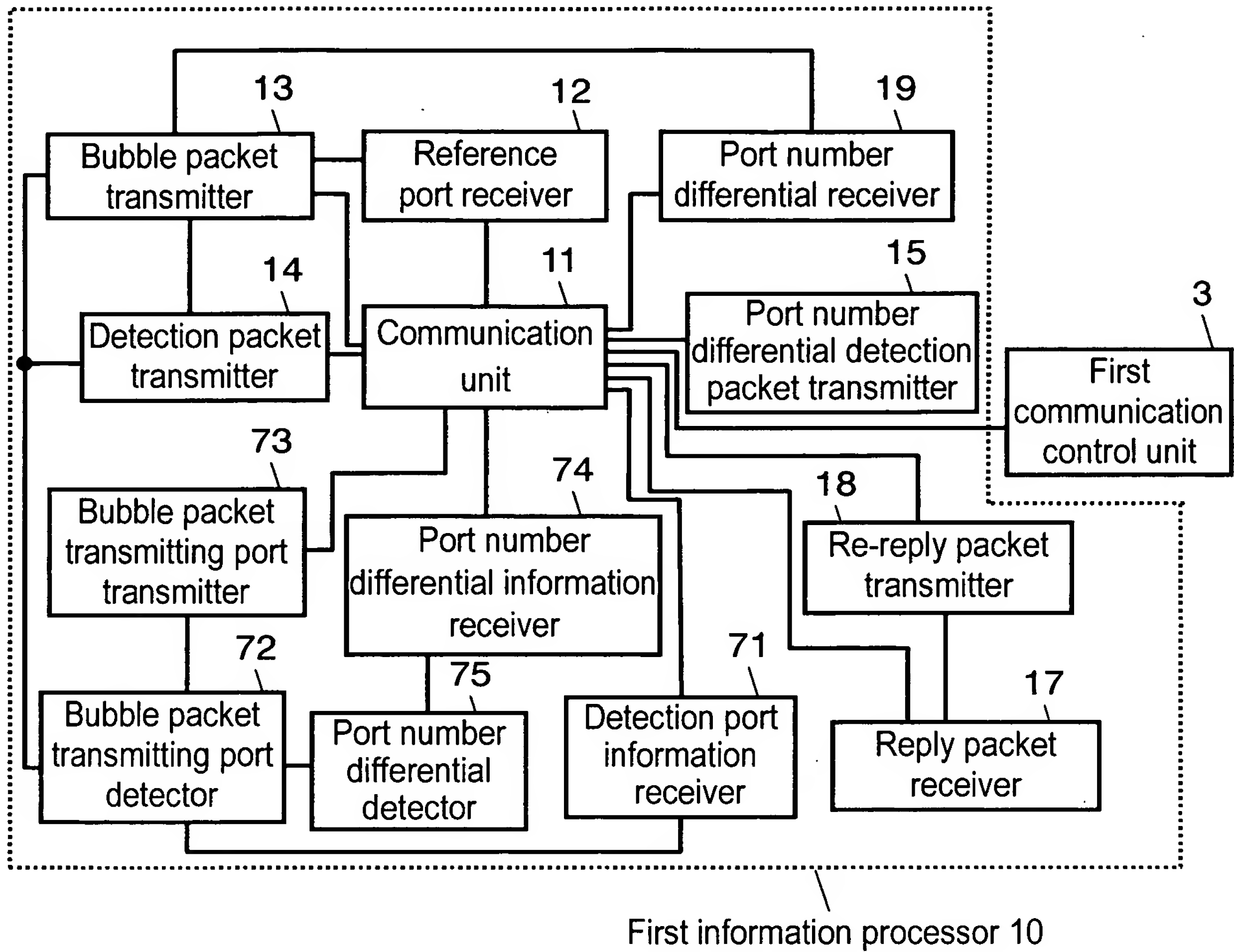
Sd : Symmetric NAT D

Se : Symmetric NAT E

PS(Sf) : Port Sensitive Symmetric NAT

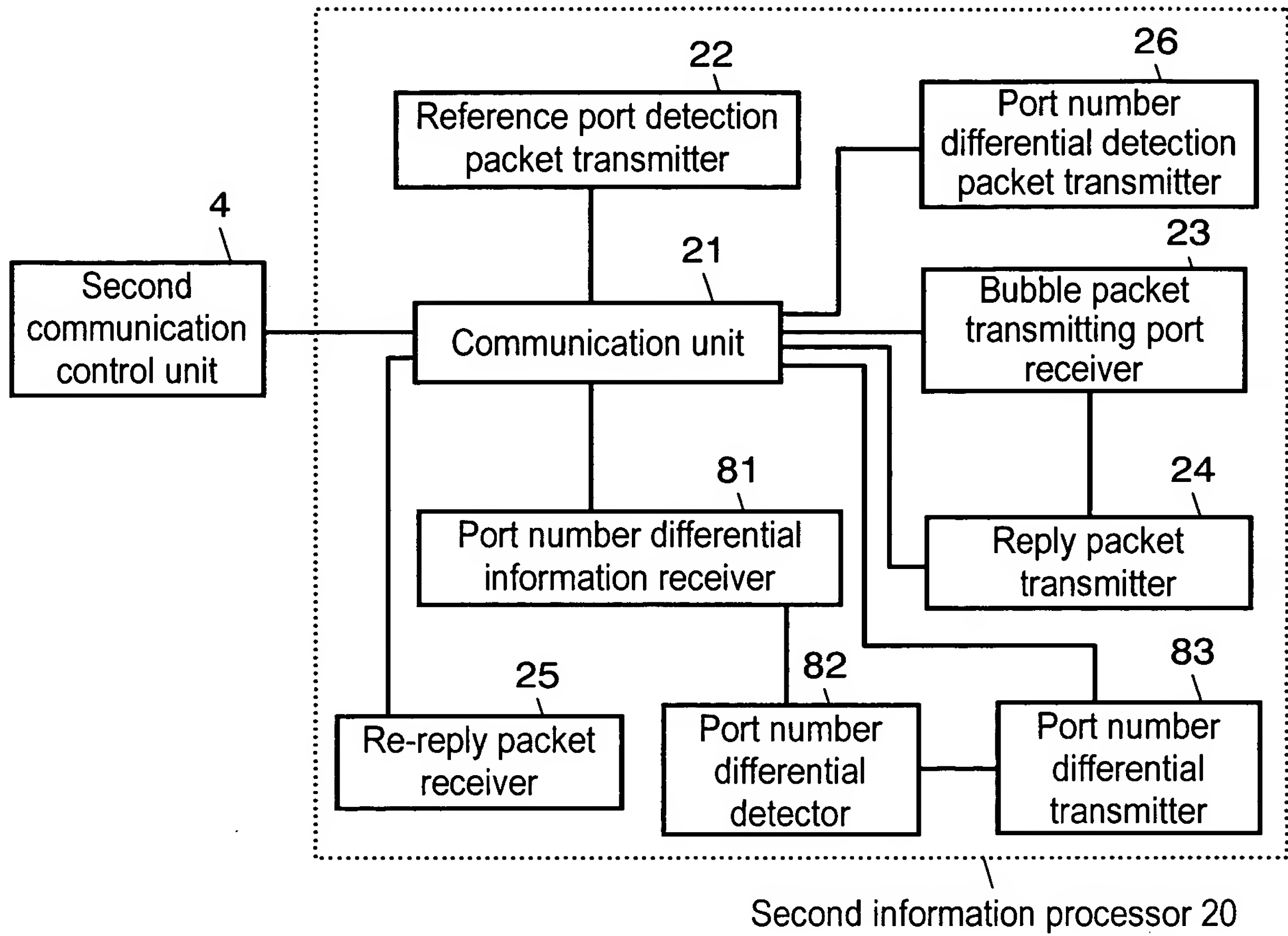
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FIG. 18



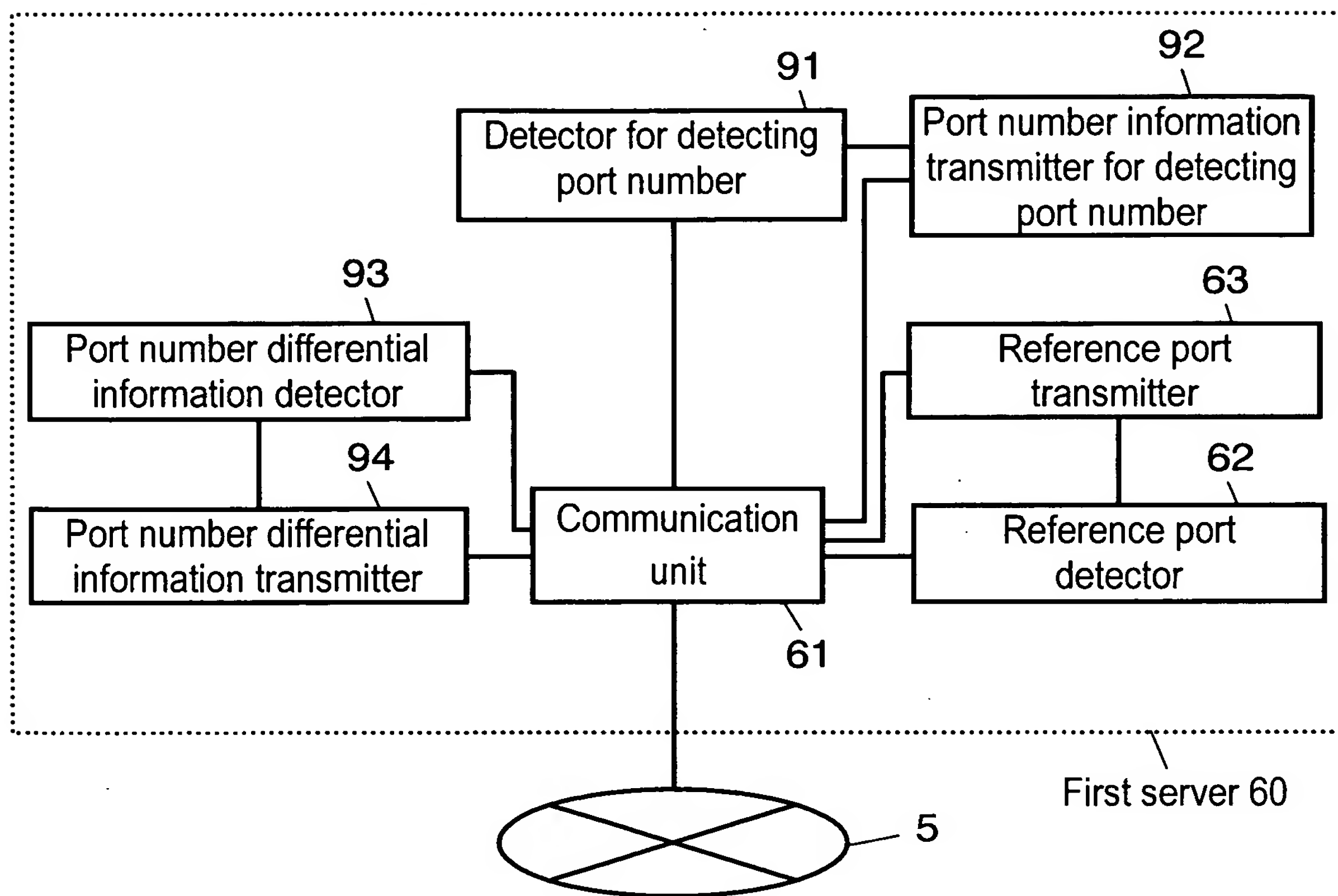
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FIG. 19



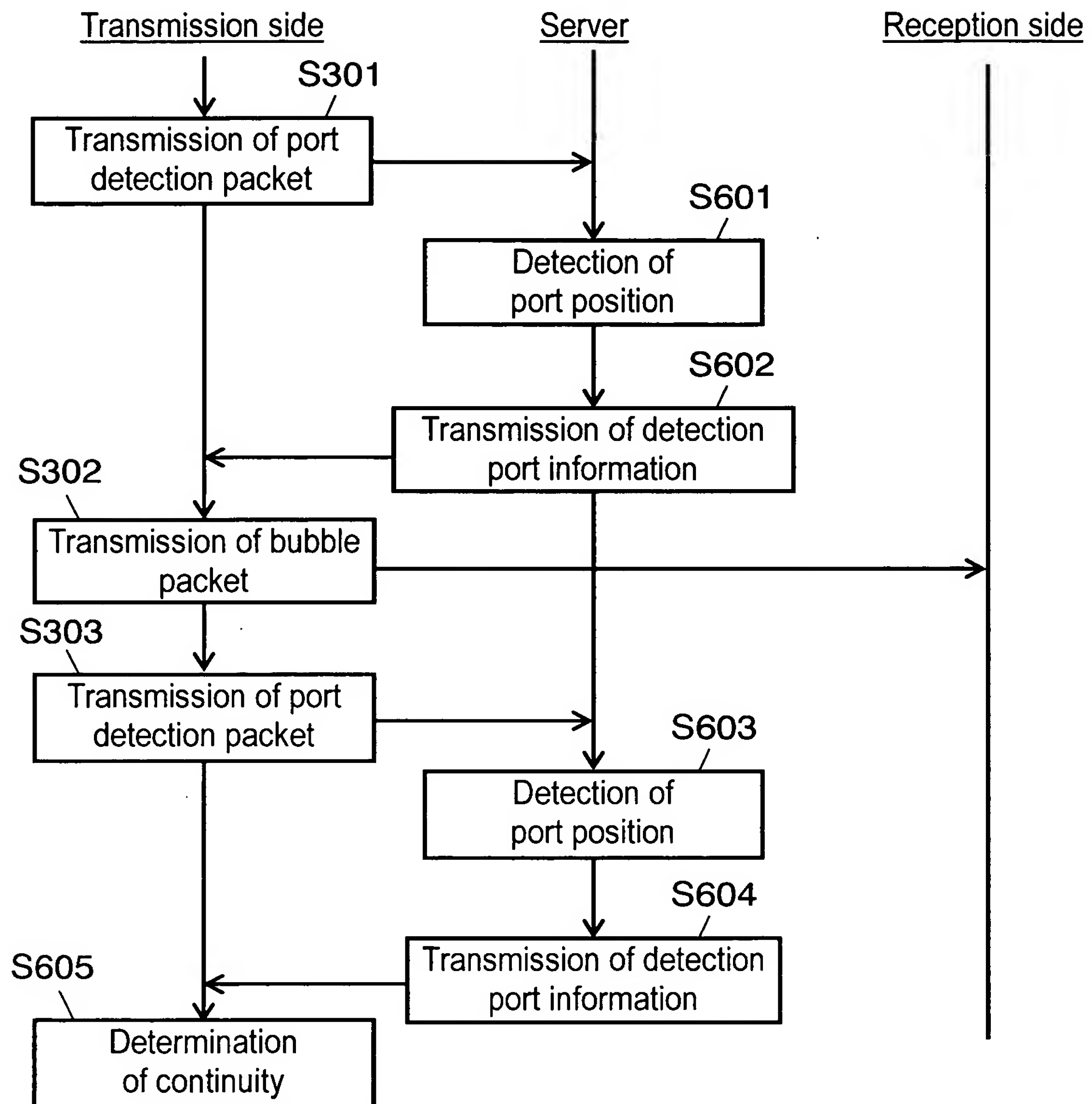
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FIG. 20



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FIG. 22



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FIG. 23

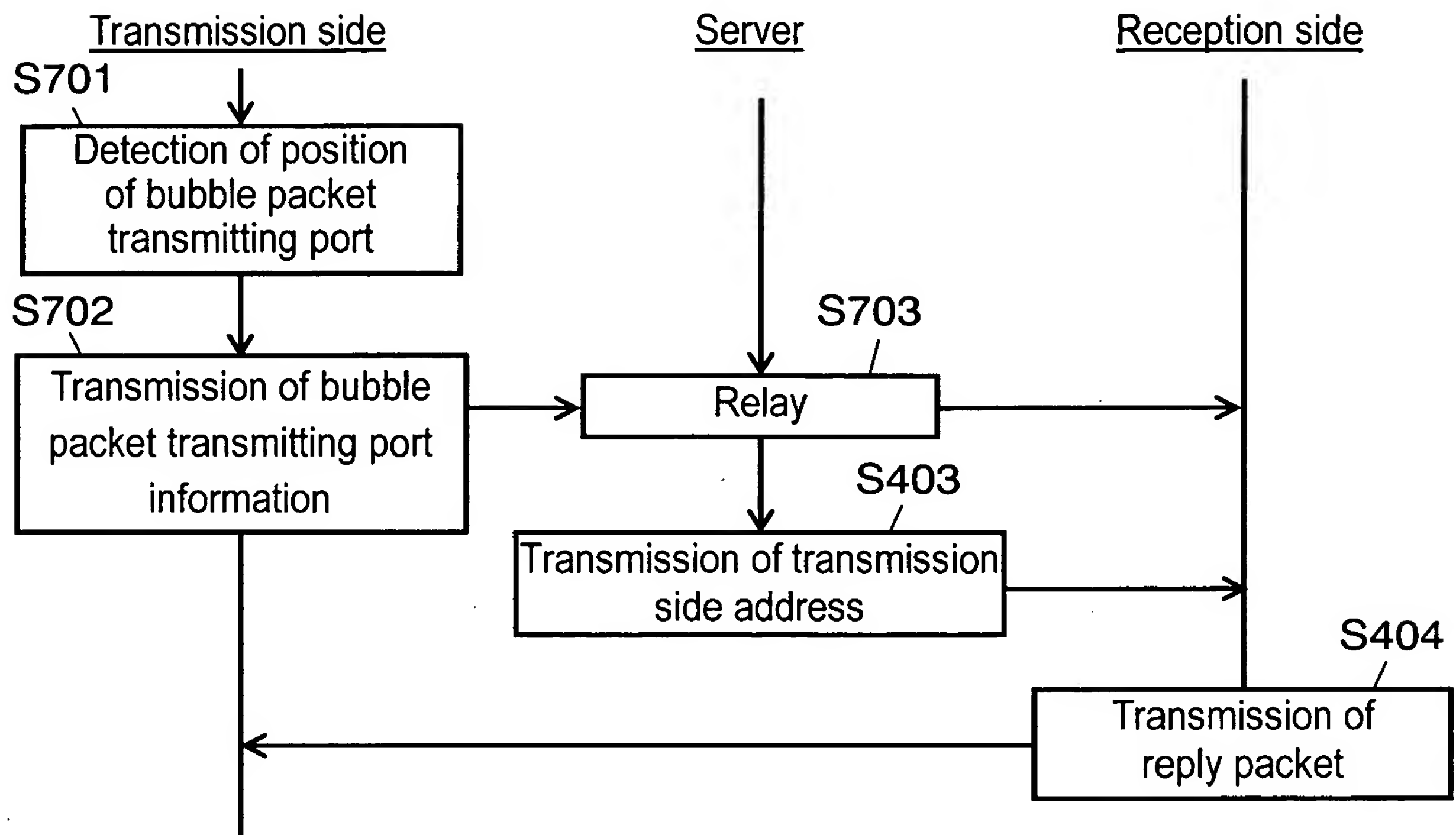
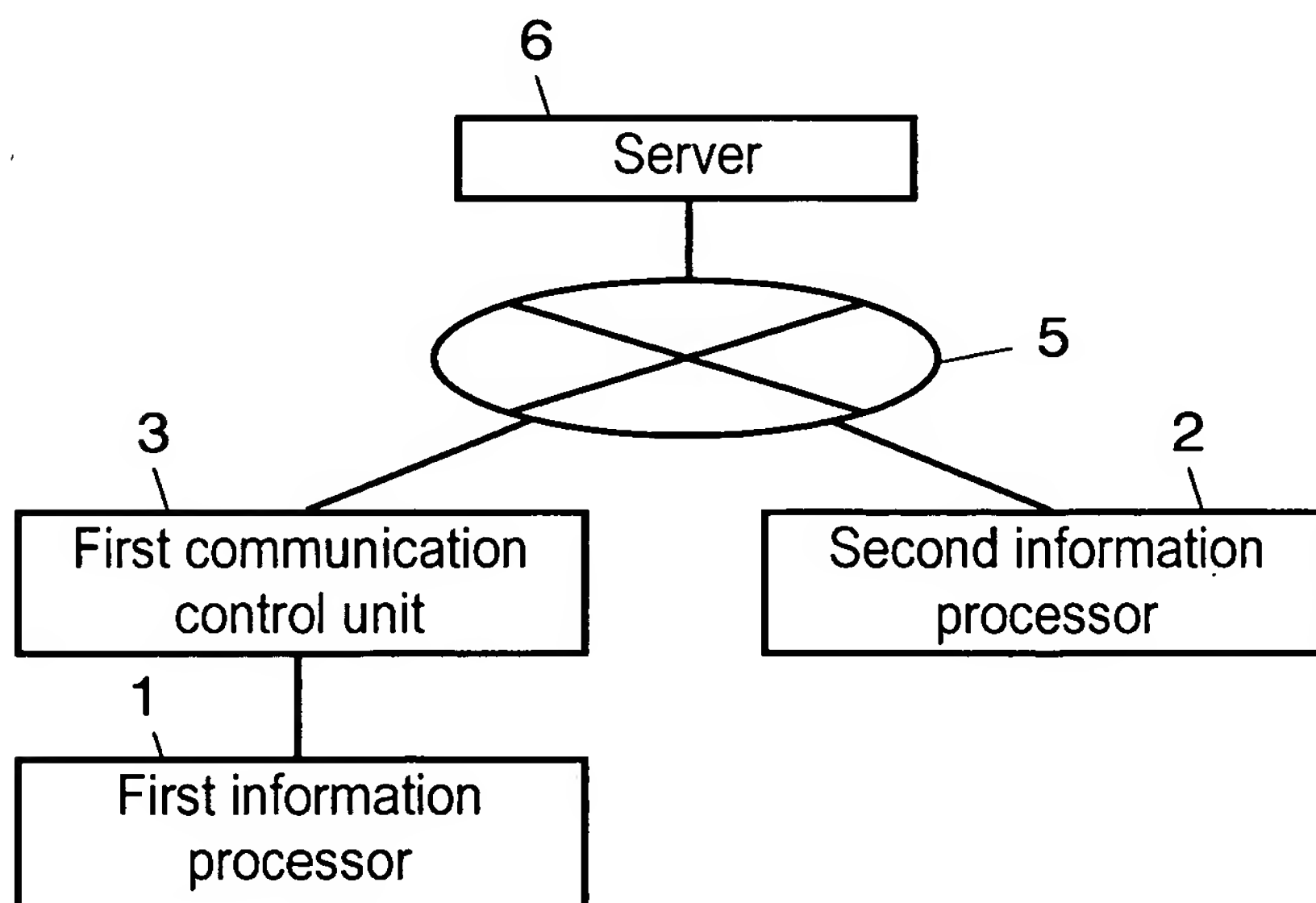


FIG. 24



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FIG. 25

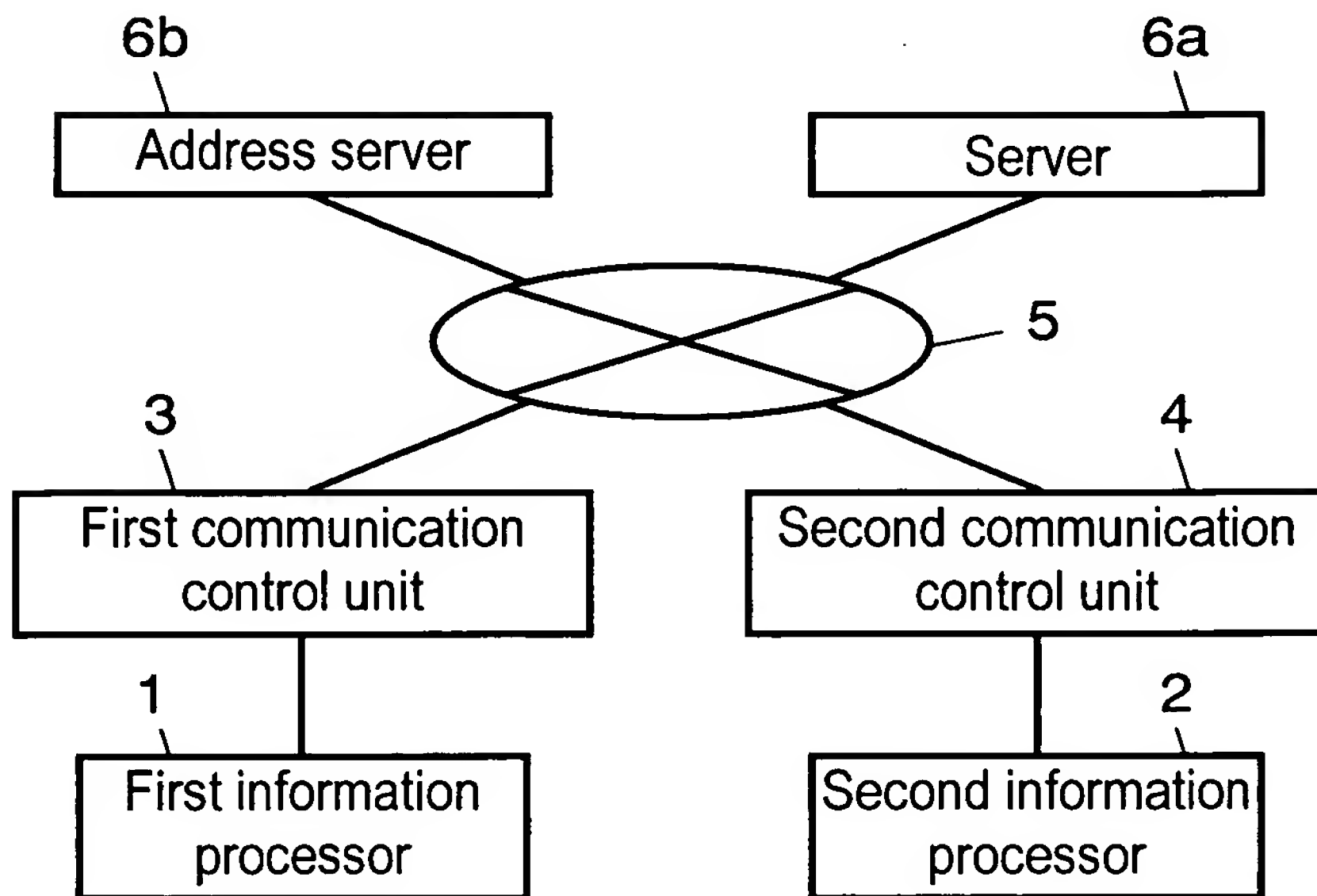
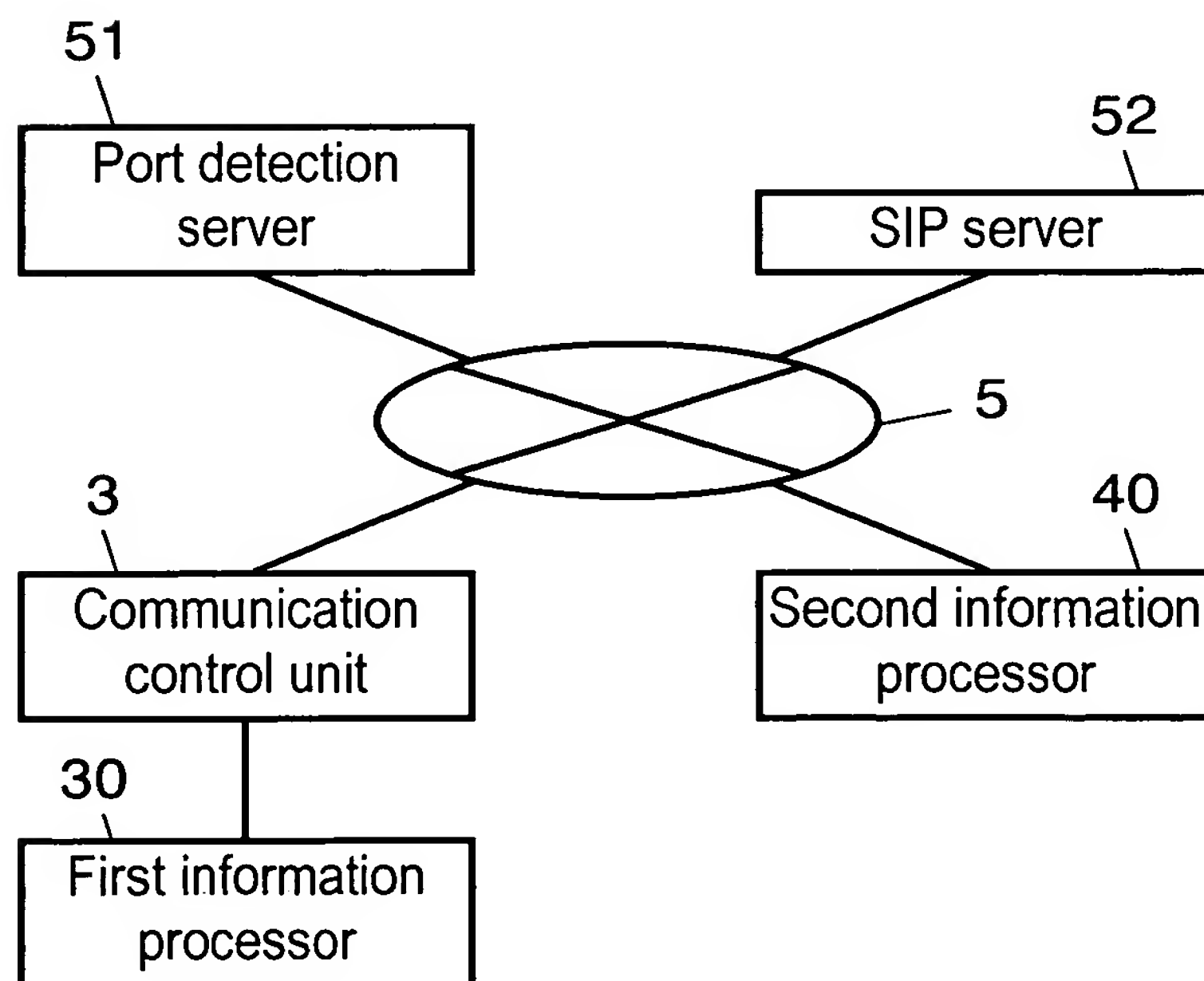


FIG. 26



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FIG. 27

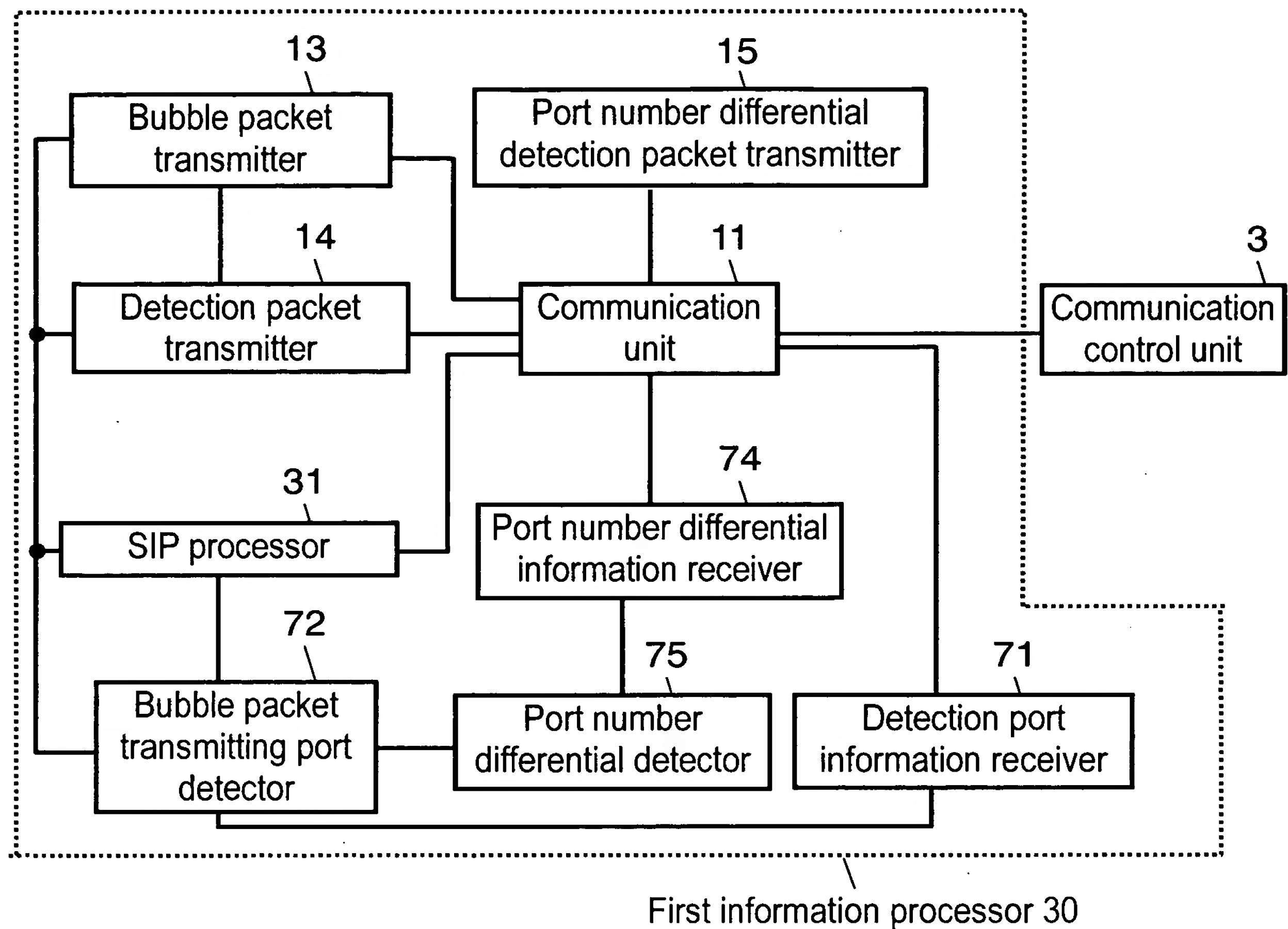
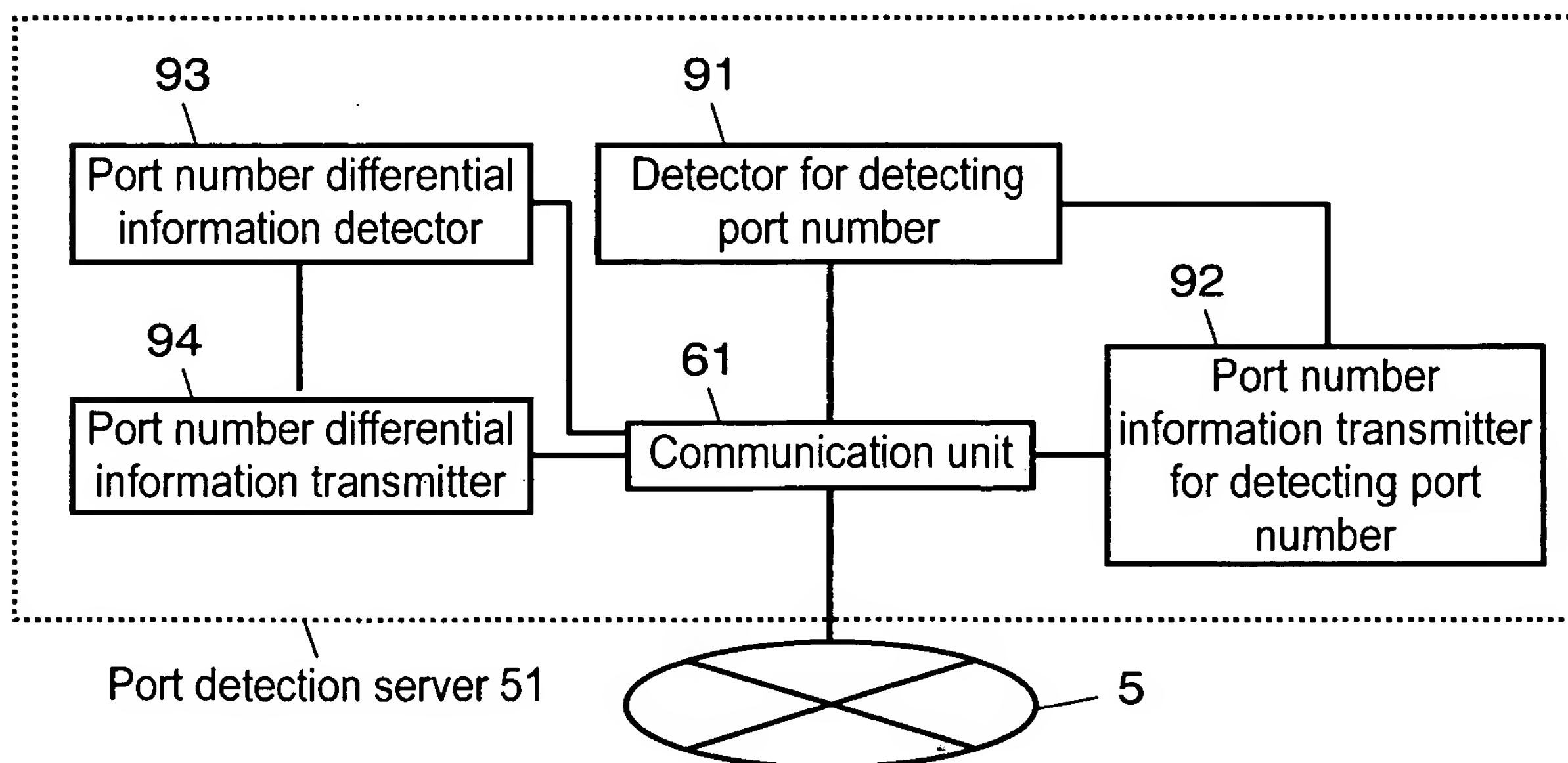
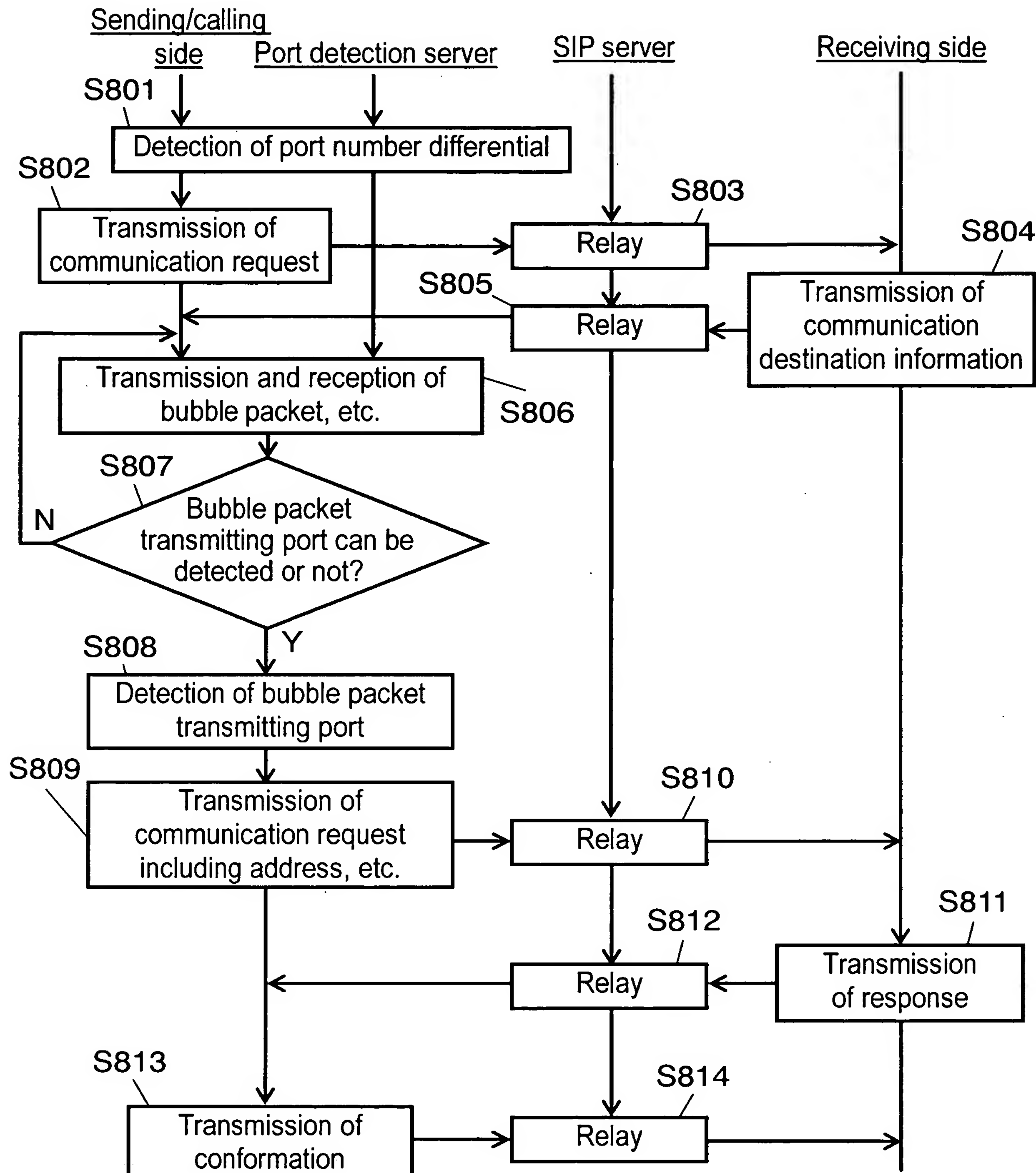


FIG. 28



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FIG. 29



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FIG. 30

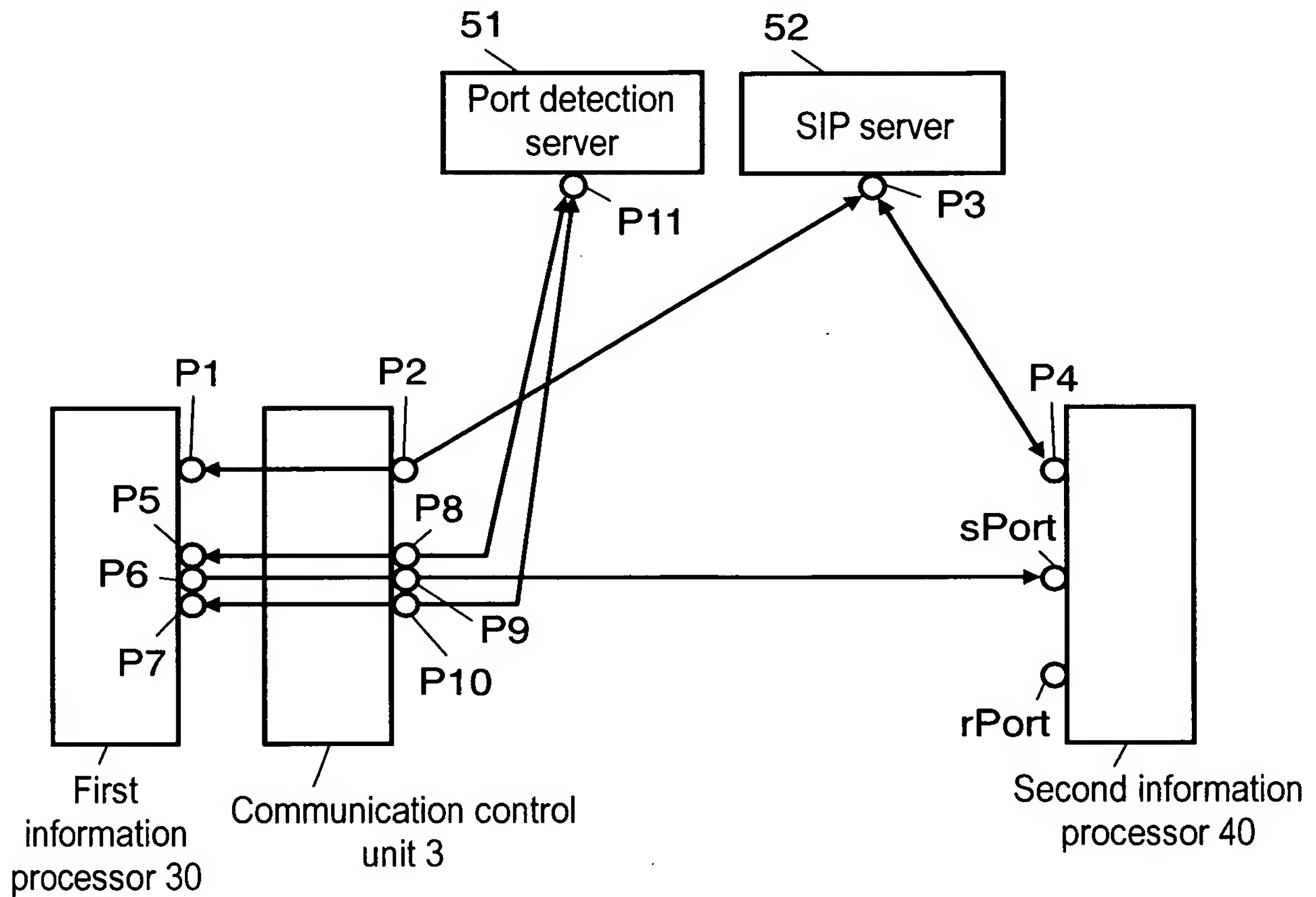


FIG. 31

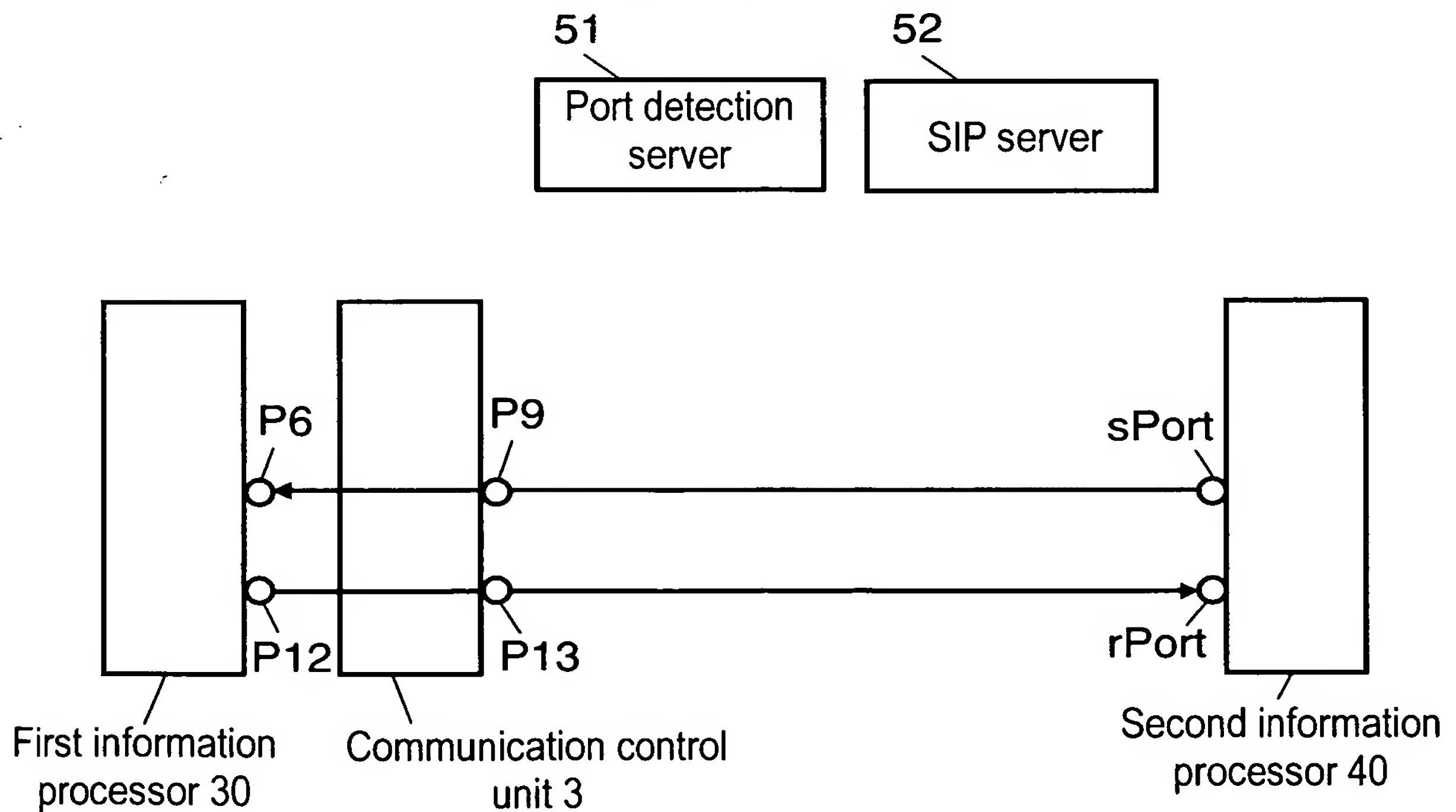


FIG. 32

Filter rule Port assigning rule	Filter rule		
	No Filter	AS Filter	PS Filter
Cone	Full Cone	Restricted Cone	Port Restricted Cone
AS	Symmetric(a)	AS NAT Symmetric(b)	Symmetric(c)
PS	Symmetric(d)	Symmetric(e)	PS NAT Symmetric(f)

FIG. 33

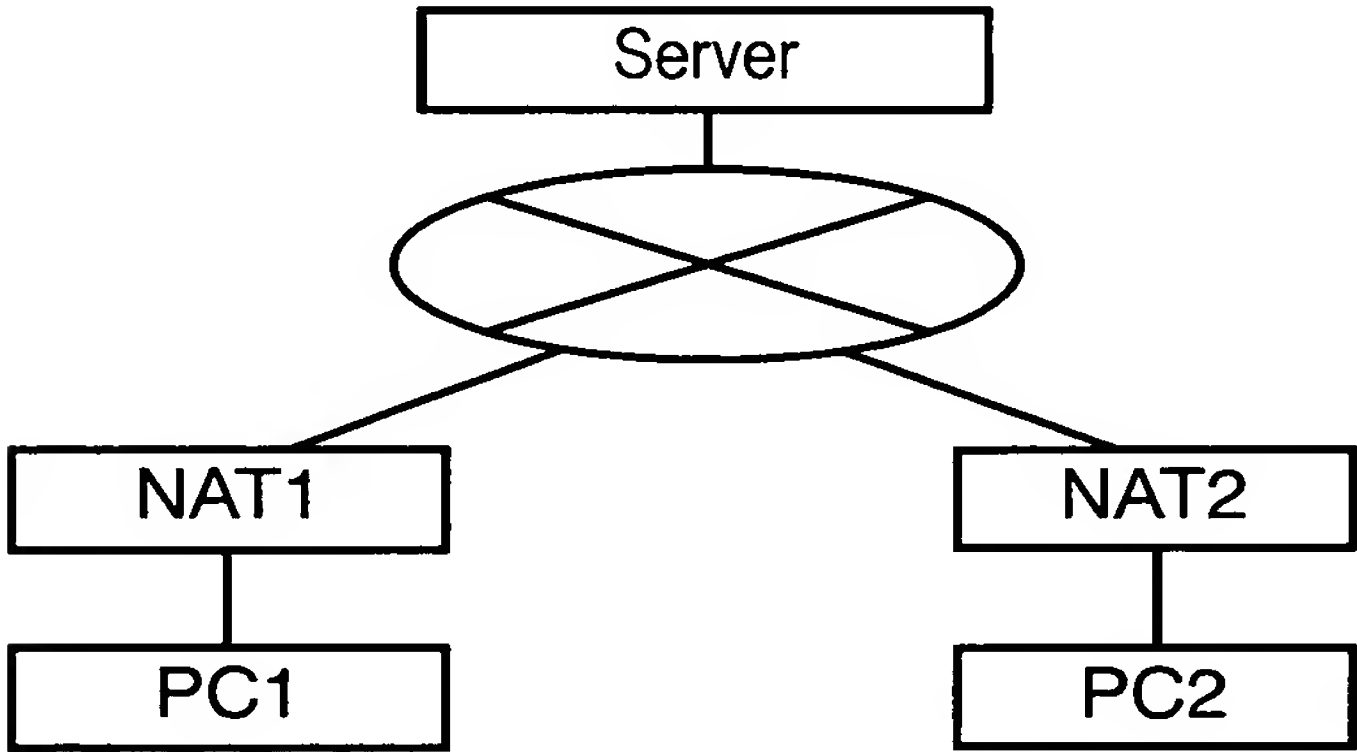


FIG. 34

<div>Reception side</div> <div>Transmission side</div>	F NAT	R NAT	PR NAT	AS NAT	PS NAT
F NAT	O * 1	O * 1	O * 1	O * 2	O * 2
R NAT	O * 1	O * 1	O * 1	O * 2	O * 2
PR NAT	O * 1	O * 1	O * 1	O * 3	O * 3
AS NAT	O * 1	O * 1	O * 3	O * 3	O * 3

O : Connection enabled
× : Connection disabled